

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



A.....	2
B.....	5
C.....	9
D.....	15
E.....	20
F.....	24
G.....	28
H.....	31
I.....	34
J.....	37
K.....	38
L.....	39
M.....	42
N.....	46
O.....	48
P.....	51
Q.....	58
R.....	59
S.....	62
T.....	70
U.....	74
V.....	75
W.....	75
X.....	78
Y.....	79
Z.....	79

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



A

AAV

Annulus access valve

AB3™ Valve

Alpha Thames' compact, quarter-turn rotary, parallel full-bore, double block and bleed, expanding plug valve.

Abandon(ment)

To cease efforts to produce oil or gas from a well, and to plug the wells of a depleted formation and salvage all material and equipment OR final plugging of wells, and/or permanent dismantling, etc. of a production platform or other installation.

ABCB

Association of British Certification Bodies

ABOI

Association of British Offshore Industries

ABS

American Bureau of Shipping OR Acrylonitrile50 butadiene styrene (a hard, tough thermoplastic).

Absorption

To soak up as a sponge takes water. It is the ability of a gas, liquid or solid to attract and retain another substance without chemical combination. A quantity of such a substance that has absorbed as much of another as is physically possible is said to be saturated with it. Some refinery processes use this ability, for instance to separate different hydrocarbons. (See also adsorption.)

ac

Alternating current

ACB

Air circuit breaker

ACC

Annulus choke – closed

Accumulator

A pressure vessel charged with nitrogen gas and used to store hydraulic fluid under pressure for the operation of hydraulic valve actuators.

Actuator

A (hydraulic or electrical) device for the remote and/or automatic operation of a valve or choke.

ACFM

Alternating current field measurement

Acidizing

The treatment of formations with hydrochloric or other acids in order to increase production or injection.

ACO

Annulus choke - open

ACoP

Approved code of practice

Acre-foot

Unit used to measure the rock volume of an oil or gas reservoir structure.

ACQ

Annual contract quantity (UK gas sales)

AD

Auto drain

ADS

Atmospheric diving system.

Adsorption

The attraction exhibited by the surface of a solid for a liquid or a gas, when they are in contact, without absorbing the liquid or gas.

ADT

Advanced drilling techniques

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



ÆSOP™

Alpha Thames' prototype System-Module™ for use in an AlphaCPU™

AFC

Approved for construction (or fabrication)

AFD

Approved for design

AFE

Approved for enquiry (or expenditure)

AFFF

Aqueous film forming foam

AFM

Approved for manufacture

AFP

Approved for purchase OR active fire protection

AGA

American Gas Association

AGSO

Australian Geological Survey Organisation

AHV

Anchor Handling Vessel.

AIP

Australian Institute of Petroleum

AISC

American Institute of Steel Construction

AISI

American Iron and Steel Institute

AIT

Auto ignition temperature

ALARP

As low (risk) as reasonably practicable.

Aliphatic hydrocarbons

A group of hydrocarbon substances, including the alkanes and most of the other fractions found naturally in crude oil.

Alkanes

Naturally occurring paraffin fractions of which the molecules are based on a "straight chain" of hydrogen; saturated carbon atoms.

Alkylation

A refining process used to produce improved gasoline components with, for instance, lower pollutant effects. The process is also used in the manufacture of plastics.

Alluvial fan

A pattern of sedimentary deposit frequently laid down by streams or rivers where they spread out into plains. Alluvial fans from past geological eras are potential reservoir structures.

AlphaPRIME™

Alpha Thames' incremental field development solution for the production and processing of subsea hydrocarbons. It provides field control from reservoir to host, and can evolve to meet all future requirements.

AlphaCPU™

The AlphaCPU™ (Central Processing Unit) is a diverless, seabed, modular, processing system for the production of hydrocarbons, which forms the heart of an AlphaPRIME™ developed field. It comprises a foundation system, KeyMAN™ and a minimum of two System-Modules™. It utilises all-electric power and control for maximum efficiency and reliability. This ensures its suitability for all field developments including deepwater applications and those requiring long tie-backs.

AMV

Annulus master valve

Anion

A negatively charged ion; an ion that is attracted to the anode during electrolysis. Compare cation.

Annular space

The ring-shaped cavity between two concentric tubes OR the space around a pipe in a wellbore, the outer wall of which may be the wall of either the borehole or the casing; sometimes termed the annulus.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS

**Annulus**

Also called the annular space (see above).

Anode

An electrically positive electrode, see sacrificial anode.

Anomaly

A deviation from the norm. In geology, the term indicates an abnormality such as a fault or a dome in a sedimentary bed.

ANP

National Petroleum Agency (Brazil)

ANSI

American National Standards Institute

Anticlinal trap

A hydrocarbon trap in which petroleum accumulates in the top of an anticline. See anticline.

Anticline

An arched, inverted-trough configuration of folded and stratified rock layers. (Compare with syncline.)

AOCC

Aberdeen Operations Control Centre

AODC

Association of Offshore Diving Contractors became International AODC (IAODC) now part of IMCA

AOF

Absolute open flow potential

AP

Annulus pressure

APAU

Accident Prevention Advisory Unit (of HSE)

API

American Petroleum Institute

APIA

Australian Pipeline Industry Association

API gravity

The standard adopted by API for measuring the density of a liquid, (especially hydrocarbons) expressed in degrees. It can be converted from specific gravity by the following equation: Degrees API gravity = $(141.5/\text{specific gravity @ } 60^{\circ}\text{F}) - 131.5$

Appraisal well

A well drilled to further confirm and evaluate the presence of hydrocarbons in a reservoir that has been found by a wildcat well.

APT

Annulus pressure transducer

Aquifer

A water-bearing rock strata. In a water-drive field, the aquifer is the water zone of the reservoir underlying the oil zone.

Aromatic hydrocarbons

The group of hydrocarbon products which include benzene, toluene, etc. and provide feedstocks for many of the main petrochemical processes, as well as high octane rating gasoline blends. So-called from their "sweet" smell.

ARPA

Automatic radar plotting aid(s)

ARRC

Australian Resources Research Centre (Perth, Australia)

Artificial lift

Any method used to raise oil to the surface through a well after reservoir pressure has declined to the point at which the well no longer produces by means of natural energy. Sucker rod pumps, gas lift, hydraulic pumps, and submersible electric pumps are the most common forms of artificial lift.

Articulated platform

A semi-buoyant structure anchored to the seabed by means of a "Universal" joint coupling which allows it to "sway" with the forces of the sea etc.; such structures need less rigid strength than fixed platforms and so are relatively lighter and cheaper to install.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Artificial drive

Methods of producing oil when natural reservoir pressures are insufficient or have declined, such as injection of gas or water into the reservoir structure.

ASME

American Society of Mechanical Engineers. ASME International.

ASNT

American Society of Non-destructive Testing

Asphalt

A solid petroleum residue, similar to bitumen, tar and pitch.

Associated gas

Natural gas which is in contact with crude oil in the reservoir or which is dissolved in the oil.

ASSV

Annulus subsurface safety valve

ASTM

American Society for Testing and Materials

ASU

Automatic synchronising unit

ASV

Annulus swab valve

AUV

Autonomous underwater vehicle

AVr

Amps Volts Reactive

AVR

Automatic voltage regulator

AWS

American Welding Society

AWV

Annulus wing valve

Azimuthing thrusters

Rotatable ducted propeller used in conjunction with a DPS to enable ships to maintain position without the use of anchors.

B

BA

Breathing apparatus

Back off

In drilling, to pull the drill-string out of, or partly out of, the borehole to unscrew a joint of drillpipe or to slacken off a line or block.

Ballast

For ships: water taken onboard specific tanks in ships to permit proper angle of response of the vessel in the water, and to assure structural stability.

For mobile offshore drilling rigs: weight added to make the rig more seaworthy, increase draft, or sink it to the seabed. Seawater is used for ballast, but sometimes concrete or iron is used additionally to lower the rig's centre of gravity permanently.

bar

Unit of pressure

bara

bar, absolute pressure

barg

bar, gauge pressure

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Barite

A very heavy substance used as a main component of drilling mud, to increase its density (mud weight) and counter-balance downhole pressures.

Barityse

Heavy rock used for rock-dumping

BarOmega

Baroid's (osmotic membrane efficiency generating aqueous) "green mud" drilling fluid

Barrel

A quantity of 42 US Gallons (34.97 UK Gallons). The traditional unit of measure of oil volume. 1m³ oil = 6.29 barrels of oil

Barrelage

A term for oil flow quantity measured by volume.

BASE

Basement rock (e.g. granite)

BASEEFA

British Approvals Service for Electrical Equipment in Flammable Atmospheres

Basket

A hollow tool used to retrieve junk from the well when fishing. The name is also sometimes given to the birdcage. OR Open framed "Basket" used for lowering/raising small components to the seabed.

Batter

The inward slope of the legs of a steel platform for stability so that the base of the jacket covers a larger area than at deck level.

bbl

barrel(s)

bbl/d

barrel(s) of oil per day (see also Mbbbl/d and MMbbbl/d)

bboe

Billion barrels of oil equivalent

BC

Barrels of condensate OR bottom choke

BCF

Bromochlorodifluoromethane (Halon 1211 extinguishant)

bcf

billion cubic feet (10⁹)

bcpmm

Barrels of condensate per million (cubic feet)

BD

Business development or basis of design

bdo

Barrels of diesel oil

bdpd

Barrels of distillate per day

BE

Bevel end

Bead

The fused metal resulting from a welding operation or "pass" in a major weld, as in a pipeline. There are normally three, the root or stringer bead, the filler bead and the cap bead.

Bean

The orifice in a flow control or choke valve. To "bean up" or "bean down" means to install a larger or smaller orifice, or to open or close a variable valve.

Bell nipple

Receptacle attached to the top of a BOP or marine drilling riser which directs the drilling mud returns to the shale shaker or mud pits.

Bentonite

See Mud.

BH

Bottom hole

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS

**BHA**

Bottom hole assembly

BHAB

British Helicopter Advisory Board

BHP

Bottom hole pressure

Billion

In oil and gas usage, a billion means 10^9 not 10^{12} . One billion cubic feet (bcf) = one thousand million cubic feet.

Bit (Drill)

The cutting or boring element used in drilling oil and gas wells. The bit consists of a cutting element and a circulating element. The circulating element permits the passage of drilling fluid and utilises the hydraulic force of the fluid stream to improve drilling rates. In rotary drilling, several drill collars are joined to the bottom end of the drill pipe column, and the bit is attached to the end of the string of drill collars. Most bits are used in rotary drilling are roller cone bits, but diamond bits are also used extensively.

Bitumen

A form of heavy, solid petroleum. See Asphalt.

Black Oil/Black Cargo

Crude oil, or distilled crude containing the fractions heavier than middle distillates.

Block

The subdivided areas of the sea for the purposes of licensing to a company for exploration or production rights. In the UK, a block is one thirtieth of a quadrant (one degree by one degree) and is approximately 200 to 250 km²; OR any assembly of pulleys on a common framework; in mechanics, one or more pulleys, or sheaves, mounted to rotate on a common axis. The crown block is an assembly of sheaves mounted on beams at the top of the derrick. The drilling line is reeved over the sheaves of the crown block alternately with the sheaves of the travelling block, which is raised and lowered in the derrick by the drilling line. When elevators are attached to a hook on the travelling block and drill pipe latched in the elevators, the pipe can be raised or lowered. See crown block and travelling block.

Bloom

The rainbow-like fluorescence shown by oil for instance when floating on water.

Blow down

The process of releasing pressure in e.g. a refinery pressure vessel by venting to atmosphere OR primary production of a crude oil or condensate reservoir using the pressure of the associated gas.

Blowout

Uncontrolled release of well fluids from the well bore during drilling operations.

Blowout preventer

See BOP

blpd

Barrels of liquid per day

BoM

Bill of material

bo

Barrels of oil

BOD

Basis of design

BOE

Barrels of oil equivalent (10 Mcf is equivalent to 1 bbl of oil. This factor is not based on either energy content or price.)

boi

Initial barrels of oil (in place).

Boomer

This expression normally refers to a compressed air, or electrical, source of sound used in marine seismic survey work.

BOP

Blowout preventer: An arrangement of valves installed at the wellhead to prevent the sudden escape of reservoir and hydrocarbon pressure during drilling completion operations. Blowout preventers on land rigs are located beneath the rig at the land's surface; on jackup or platform rigs, at the water's surface; and on floating rigs, on the seabed.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS

**bopd**

Barrels of oil per day

Borehole

A well, especially referring to the face of the rock outside or below the casing. Test boreholes are also sunk to examine the suitability of a site for major foundation work, and to examine geological formations at points where no hydrocarbons are expected.

Bottles

Small pressure vessels of various kinds, especially to absorb pressure fluctuations OR cylindrical flotation tanks such as those temporarily attached to a platform jacket during placement.

Bottom-hole

The deepest part of a well

Bottom-hole assembly (BHA)

This includes the drilling bit, drill collars, stabilizers and other drilling components run into the well on the end of the drillpipe. See Drill String.

Bottom-hole pressure

Formation pressures measured at reservoir depth.

Bottom-hole pump

A pump installed in the lower end of the wellbore, to increase productivity. (Also downhole pump.)

Bottom of the barrel

See Fuel Oil, Heavy Ends, etc.

Bottoms up

Circulation of drilling fluid in a well, until the bottom hole mud and cuttings reach the surface, indicating that normal circulation can commence.

Bow thruster

A propeller mounted transversely in the bows of a vessel to assist in docking, manoeuvring and station keeping. (See Thrusters.)

Box

The hollow, or female end in a threaded connection, such as a drillpipe.

bpd

Barrels per day

Bridge plug

A down hole packer assembly used in a well to seal off or isolate a particular formation for testing, acidizing, cementing, etc. Also a type of plug used to seal off a well temporarily while the wellhead is removed.

BRINDEX

Association of British Independent Oil Exploration Companies

BS

British Standard OR bottom sediment

BS&W

Basic sediment and water (e.g. crude oil shipment adjustment)

Brown Book

The Department of Trade and Industry's annual publication which contains facts and figures relevant to oil and gas production in the UK; it is available from HMSO

BSI

British Standards Institution

British Trade International

part of DTI, (Not to be referred to as BTI), see also IEP

BTEX

Benzene, toluene, ethylbenzene and xylene

BTM

Bromotrifluoromethane (Halon 1301 extinguishant)

Btu

British thermal unit

Bubble point

The point at which dissolved gasses begin to vaporise from a liquid. It is dependent upon temperature, pressure, and gas/liquid composition.

Bunker 'C'

A heavy residual fuel oil obtained as a result of distillation of crude oil, and used as fuel primarily for marine steam generation.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Bureau Veritas

Verification authority

BV

Bureau Veritas

BW

Butt weld

bwpd

Barrels of water per day

C

°C

Degrees Celsius - $^{\circ}\text{C} = 5/9(^{\circ}\text{F}-32)$

CA

Certifying Authority

CAA

Civil Aviation Authority

Caisson

Length of pipe extending vertically downwards from an installation into the sea as a means of disposing of waste waters, or for the location of a seawater pump OR one of several columns made of steel or concrete, which serves as the foundation for a rigid offshore platform rig, such as the concrete gravity platform rig OR a steel or concrete chamber that surrounds equipment below the waterline of an arctic submersible rig, thereby protecting the equipment from damage by moving ice.

Caisson-type platform rig

A rigid offshore drilling platform that stands on steel caissons and is used to drill development wells. The caissons are firmly affixed to the seabed and the drilling and production decks are laid on top of them. The platform is used in certain arctic waters where the caissons are needed to protect equipment from moving ice. See also platform rig.

Caliper

(Calliper in the UK) A tool for checking casing in a well for deformation before e.g. running drilling tools, which might become stuck, or packers which might leak.

CALM

Catenary anchor leg mooring.

Calorific value

The quantity of heat produced by complete combustion of unit weight of a material. Expressed as either calories per gram, or British Thermal Units (btu) per pound, or btu per standard cubic foot of gas.

C&C

Circulating and conditioning (drilling fluid).

C&F

Cost and freight only. (See also CIF)

C&W

Coat and wrap (e.g. pipeline protection)

Cantilevered jackup

A jackup drilling unit in which the drilling rig is mounted on two cantilevers that extend outward from the barge hull of the unit. The cantilevers are supported only at the barge end.

CAP 437

Helicopter Landing Areas (CAP - Civil Aviation Publication).

Cap bead

Welding term, see Bead.

CAPEX

Capital expenditure

CAPO

Computer assisted platform operations

CAPP

Canadian Association of Petroleum Producers

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Cap rock

An impermeable layer of rock above a discovered or potential hydrocarbon reservoir, providing a seal to contain the reservoir fluids.

Carbon dioxide (CO₂) injection

A method used in secondary recovery from an oil reservoir, in conjunction with water flooding.

Casing

Steel pipe placed in an oil or gas well as drilling progresses to seal the well and to prevent the wall of the hole caving in during drilling, to prevent seepage of fluids, and to provide a means of extracting petroleum if the well is productive. A number of casing strings (lengths) are used in decreasing diameters.

Catenary

The curve assumed by a chain or cable suspended between two points (e.g. an anchor chain).

Cathodic protection

Corrosion protection system which relies on sacrificial anodes or impressed current to protect submerged steel components from corrosion by electrolytic action.

Cation

A positively charged ion; an ion that is attracted to the cathode during electrolysis. Compare anion.

Catwalk

A narrow elevated platform or walkway for access to equipment.

Cave-in

Collapse of part of the wall of a borehole usually in a poorly consolidated rock formation.

Cavern storage

Underground natural or man-made storage chambers in suitable impermeable or artificially-lined rock formations. They may also be designed for cryogenic storage. See also Jug.

CB

Centre of buoyancy

CBI

Confederation of British Industry

CC

Choke valve – close

cc

Cubic centimetre (cm³)

CCR

Central control room

CCTV

Closed circuit television

CCU

Catalytic cracking unit

CD

Calendar day OR cellar deck OR closed drains OR compact disk OR contract depth

CE

Carbon equivalent OR Community European

CEI

Council for Engineering Institution

Cellar deck

The deck or floor beneath the working floor of a drilling rig OR the deck below the main superstructure of an offshore platform.

Cement

A powder consisting of alumina, silica, lime and other substances that hardens when mixed with water. Extensively used in the oil industry to bond casing to the walls of the well bore. (Also Cem.)

Centipoise (cP)

A unit of measurement of dynamic viscosity. It expresses the force needed to overcome resistance to flow, and to maintain unit velocity of flow, in a given field.

Centralisers

Spacing collars attached to the outside of casing when run in a well, to keep it central in the bore and ensure an evenly-shaped annulus in which cement can circulate and set.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Centrifuge

A separator operating on the principle of differential acceleration of particles of different mass, an effect produced by equipment similar to a turbine "spinning" the feedstock in an enclosed chamber.

Certification (Classification)

The process of certifying the origin, quality, and fitness for use of operation to given standards of a platform structure, process, item of equipment etc. Certification originated in ship construction and insurance classification. Hence major Certification Authorities acceptable to Government agencies etc., are Lloyds Register of Shipping, American Bureau of Shipping, Bureau Veritas and Det Norske Veritas (DNV). OR Classification of electrical equipment for hazardous locations to BASEEFA Standards.

CF

Connection function OR cubic feet

cfb

Cubic feet per barrel

CFC

Chlorofluorocarbons

CFD

Computational fluid dynamics

cfg

Cubic feet of gas

CG (CoG)

Centre of gravity

Cg.

Coring

C/H

Cased hole

Channelling

During production from a reservoir which is being supported by pressure from contiguous water or gas, the water or gas tends to travel towards the well bore faster through channels or layers of more permeable rock (see Permeability) by-passing and "holding back" production from the less permeable rocks.

CHAOS

Consequences of Hazards and Accidents on Offshore Structures

CHARM

Chemical Hazard and Risk Management

Check valve

A non-return valve, allowing only one-way flow.

Checkerboard Leasing

A phrase used in exploration to describe granting concessions or leases on alternate blocks. A discovery will tend to increase the value of contiguous blocks still unlet.

CHIP

Chemicals (Hazard Information and Packaging for supply)

Choke

A valve (or valve-like device) with a fixed or variable aperture specifically designed to regulate the flow of fluids OR an aperture restricting flow in a well or flowline. See also Bean.

Christmas tree

An arrangement of isolation valves, pressure gauges and possibly chokes installed at the top of a well to control the flow of oil and gas after the well has been drilled and completed.

CI

Chemical injection OR corrosion inhibitor OR compression-ignition

CIF

Cost, insurance, freight (included in price). See also C & F.

CIMAH

Control of Industrial Major Accident Hazards Regulations (1984).

Circulating components

The equipment included in the drilling fluid circulating system of a rotary rig. Basically, the components consist of the mud pump, rotary hose, swivel, drill stem, bit and mud return line.

Circulation bottoms-up

See Bottoms-up.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Circulation drilling

The passage of fluids, primarily drilling mud, down the interior of the drill-stem and back to the surface via the annulus. (Reverse Circulation is in the opposite direction.)

CISPR

International Special Committee on Radio Interface

CITHP

Closed-in tubing head pressure

CIV

Chemical injection valve OR Chemical isolation valve

Cl₂

Liquid chlorine

Class A Fires

Fires involving cellulosic combustibles, e.g. paper, wood etc.

Class B Fires

Fires involving burning liquids (including hydrocarbons).

Class C Fires

Fires involving burning gases (including hydrocarbons).

Class D Fires

Fires involving burning metals.

Clastic Rock

Rock which has been formed from the sediment and detritus of other rocks e.g. sandstone, shale, conglomerates, etc.

Closure

Four-way (all round) closure or seal is necessary, over the top and down the gradients on the sides of a potential reservoir, before it can trap or retain hydrocarbons. Closure may be structural as in an anticline, or may be partly due to an impermeable fault, or stratigraphic trapping or e.g. salt intrusion.

Cloud Point

The temperature at which paraffin waxes will solidify and give a cloudy appearance to the oil of which they form part.

CMB

Conventional mooring buoy OR Choke manifold base

C-Mn

Carbon manganese steel

CMS

Commissioning management system

CMTS

Control module test stand

CNG

Compressed natural gas

CO

Carbon monoxide OR Choke valve – open OR Cleaned/circulated out. (See also CO & S)

CO₂

Carbon dioxide

CO&S

Clean out and shoot (well)

Coating (pipeline)

Cement applied externally, weight-coating OR anti-corrosion compounds applied internally.

COF

Calculated open flow

CoF

Certificate of Fitness

Cofferdam

In platform construction, the "floatable" wall used to seal a dry construction dock. When the dock is filled with water for platform float-out, the cofferdam is de-ballasted and floated to one side to allow egress. Cofferdams have various other uses.

COHb

Carboxyhaemoglobin

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Coiled tubing

Flexible, high-pressure steel tubing used in production piping (often down hole) to deliver chemicals and equipment to the local problem site. E.g. Can be used to deliver methanol directly at the site of a hydrate plug.

Commissioning

Preparatory work, servicing etc. usually on newly-installed equipment, and all testing prior to full production testing (see Start Up).

Common Carrier

The legal status of some pipeline companies, primarily in the USA.

Comms

Communications (systems)

Complete a well

To finish work on a well and bring it to productive status. See well completion.

Completion

Installation in a well of production tubing and equipment, wellhead and Christmas Tree OR fulfilment of a contractual obligation.

Completion test

The procedure specified in e.g. a construction contract, or project financing agreement, for determining whether the plant, field development, etc. in question meets the operating specifications laid down. A completion test may in some cases extend over several months.

Concession

a licence, lease, or other permit for exploration and/or production in an area or block. It usually donates a government lease.

Condensate

Volatile liquid consisting of the heavier hydrocarbon fractions that condense out of the gas as it leaves the well, a mixture of pentanes and higher hydrocarbons. See also gas condensate.

Conductor casing

Generally the first string of casing in a well. It may be lowered into a hole drilled into the formations near the surface and cemented in place; or it may be driven into the ground by a special pile driver (in such cases, it is sometimes called drive pipe); or it may be jetted into place in offshore locations. Its purpose is to prevent the soft formations near the surface from caving in and to conduct drilling mud from the bottom of the hole back to the surface when drilling starts. It supports the subsequent drilling strings. See also conductor pipe.

Conductor pipe

A short string of large diameter casing used to keep the wellbore open and to provide a means of conveying the upflowing drilling fluid from the well bore to the mud pit. It is the first pipe to be inserted (spudded) into the seabed when drilling a hole

Confirmation Well

An early appraisal or step-out well.

Coning

If an oil well is produced at excessive rates the reduction in reservoir pressure may tend to draw up underlying water towards the well in a cone like shape. Likewise gas can be drawn downwards from an overlying gas cap.

Connate Water

The original water content of a reservoir rock. Connate water reduces the pore-space (porosity) available to hydrocarbons. Sometimes called interstitial water.

Continental Shelf

The shelving area covered by shallow water around major land masses. It may be 50-100 miles (80-200 km) in width and merges into the steeper Continental Slope, and yet steeper Continental Rise which descends to the ocean floor.

Controlled directional drilling

See directional drilling.

COP

Code of practice

Core

A cylindrical sample taken from a formation for geological analysis. Usually a conventional core barrel is substituted for the bit and procures a sample as it penetrates the formation. To obtain a formation sample for analysis.

Coring

The process of cutting a vertical, cylindrical sample of the formations encountered as an oilwell is drilled. The purpose of coring is to obtain rock samples or cores in such a manner that the rock retains the same properties that it had before it was removed from the formation.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



COSHH

Control of Substances Hazardous to Health (Regulations 1999)

CoQ

Certificate of quantity (or quality). (Also CQ)

COTS

Commercial off the shelf (components)

COV

Crossover valve

CP

Corrosion protection (OR cathodic protection) OR casing pressure

Cp

Centipoise, a unit of measurement of dynamic viscosity (See Centipoise)

CPF

Casing pressure, flowing. (See also CPSI)

CPI

Choke position indicator

CPSI

Casing pressure, shut in. (See also CPF)

CPU

Central processing unit (see AlphaCPU™)

CRA

Corrosion-resistant alloy OR Comparative risk assessment

Cretaceous

Rock formed in the last period of the Mesozoic era, between the Jurassic and the Tertiary periods, during which chalk deposits were formed.

CRINE

Cost Reduction in the New Era; a joint initiative by the UK government and the oil industry to standardise documentation thereby reducing cost. CRINE has been absorbed into another initiative: LOGIC Leading Oil & Gas Industry Competitiveness.

Critical Path Analysis

A project planning tool normally used in large construction/development projects. It is based on a "network" of necessary actions of known sequence and duration, and aims at identifying priority points at which actions "critical to" (holding up other progress on) the project need improvement or elimination.

CRM

Corrosion resistant material

Crossover

An item used to connect one component to another differing in size, thread type or pressure rating.

Crown block

An assembly of sheaves, mounted on beams at the top of the derrick, over which the drilling line is reeved. See block.

Crude Oil

An unrefined mixture of naturally-occurring hydrocarbons. Because it is essentially a mixture, the density and properties of Crude Oil vary widely. Light Crude normally has an A.P.I. gravity of 30° or more. Gravities of 20° to 30° include the medium gravity crudes, while those below 20° are known as Heavy. Heavy oils are found right down to the residual solid state. See Section 8. Sour crude has a significant sulphur content; Low-sulphur crude is described as sweet.

Cryogenics

In oil industry terms this refers to very low temperature handling processing or storage of hydrocarbon substances. See also Cavern storage.

CSA

Continental Shelf Act (1954) OR Cross Sectional Area relative to electrical cables

CSCC

Chloride induced stress corrosion cracking

CSG

Casing

CSMA/CD

Carrier Sensing Multiple Access with Collision Detection

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



CSON

Continental Shelf Operations Notice

CSP

Chlorosulphonated polyethylene, material used for cable sheathing

cST

Centistroke, unit of measurement

CSTR

Constantly stirred tank reactor

CSWIP

Certification scheme for weld inspection personnel

CT

Connection tool OR Computer tomography (used to inspect flexible risers) (See also TomX a/s) OR Coiled tubing

ct

Current transformer

CTOD

Crack tip opening displacement

CTRs

Cost, Time and Resource planning sheets

cum wt

cumulative weight

CUSP™

Connection of Underwater Systems and Pipe/flowlines; it is a lightweight, diverless, horizontal connection system developed by Alpha Thames Ltd, that is suitable for the connection of both rigid and flexible flowlines, pipelines and umbilicals. CUSP™ has been designed to significantly reduce the complexity of subsea tie-in and connection operations.

Cut/Cut Point

A "cut" is a hydrocarbon substance or group of substances extracted from a wider mixture in a refining process. For instance, primary distillation will usually yield a Naphtha/Gasoline cut, a Middle Distillate cut, and a Residual Fuel Oil cut, with an "Overhead Cut" of gases. The specific gravity at which each cut is separated by the process is the Cut Point. Cuts are made with progressive fineness and accuracy as the oil proceeds through the refinery.

Cuttings

The small chips or flakes of rock retrieved from a well by the circulation of the mud. They are studied and logged by the well-site geologist.

C/WO riser

Completion/workover (temporary riser for these operations)

CW

Cold water

D

D

Diesel pump

DAF

Dynamic amplification factor

Daisy chaining

The name given to the series connection of wells by flowlines.

Darcy

The unit of measurement of rock permeability, i.e. the extent to which it will allow a fluid to flow through it. The permeability of most oil and gas reservoir rocks is measured in millidarcies, (thousandths of a Darcy).

Data

Although applied to any factual information, this term most commonly refers to seismic "data" – the computer records and output of a seismic survey.

D&A

Dry and abandoned

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



- db** Dry bulb temperature
- dB** Sound pressure level in decibels and measurement of attenuation in signal/comms lines.
- DBB** Double block and bleed
- dc** Delayed-action coker OR Direct current
- DCQ** Daily contract quantity (UK gas sales)
- DCR** Design and Construction Regulations (SI 1996/913).
- DCS** Distributed control system
- DDC** Deck decompression chamber
- DDCV** Deep draught caisson vessel
- Dead Oil** Oil containing no natural gas.
- Dead weight tonnage (DWT)** The load-carrying capacity of a vessel, the "live" weight being the displacement weight of the unladen vessel.
- Dead well** A well which will no longer produce without further stimulation.
- Decompression (chamber)** The process of gradually re-acclimatizing deep divers to surface pressure conditions. For relatively shallow dives, this is achieved by controlling the rate of ascent. For longer, deep, "saturation" dives, the divers are recovered under pressure into a Decompression Chamber where pressure reduction may take some days.
- Deep rig** A drilling rig designed and equipped to withstand the loads and pressures associated with drilling to deep objectives e.g. over 20,000 ft (6,000 m).
- DEG** Duoethylene glycol
- De-gasser** A separator which removes from the returned mud flow any entrained gases from formations down the well. Gases can cause a potentially dangerous reduction in the density of the mud and hence its ability to contain down-hole pressures OR any process which removes gases of various kinds from an oil flow.
- Dehydrator (gas)** Equipment for the removal of water from a gas stream, for instance prior to transfer by pipeline.
- Delineation well** An appraisal well, usually one drilled specifically to determine the boundary of a discovered reservoir.
- DEM** Demulsifier
- D En (also DEn & D.En)** Department of Energy (UK Government)
- Depletion** Progressive reduction in reserves as a result of production. Depletion allowance in some countries is a type of tax-allowable amortization recognising this reduction. Depletion drive is primary production, i.e. as a result of a discovered reservoir gases with decreasing pressures.
- Depth map** A relief map of a sub-surface geological structure where the contours relate to depths from the surface datum level, (i.e. sea level). This is a further interpretation of a seismic time map.
- Derivatives** The type most frequently used in the oil and Gas industry are psuedo-sales transactions (rather than physical sales of oil, etc). The simplest is the forward sale of oil that is not intended to be delivered, but "matched" with a suitable purchase at some intervening time. Derivatives include "Swaps" and "Options". Their most common use is to control price risk fluctuations through the markets rather than in conflict with them.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Derrick

A large load-bearing structure, usually of bolted construction. In drilling, the standard derrick has four legs standing at the corners of the sub structure and reaching to the crown block. The substructure is an assembly of heavy beams used to elevate the derrick and provide space to install blowout preventers, casing heads, and so forth. Because the standard derrick must be assembled piece by piece, it has largely been replaced by the mast which can be lowered and raised without dismantling.

Design wave

The maximum size and frequency of wave that an offshore structure must be able to withstand.

Development

Any major construction such as a refinery, or a production project. It has come to mean, or cover, the whole life of a production project from design to abandonment. Strictly speaking it refers to the planned, and actual production of reserves from a reservoir.

Development well

A well drilled in proven territory in a field to complete a pattern of production OR an exploitation well.

Deviated well/hole

A well whose path has been deliberately diverted from the vertical. They are used particularly offshore to reach distant parts of a reservoir from a single platform. Deviated, or directional drilling up to 60° to 70° from the vertical is now fairly common. Greater deviation is possible with special equipment – see horizontal drilling and slant drilling.

Dew point

The temperature at which liquids condense from a gas.

DFI

Design, fabrication, installation

DFCS

Diverless flowline connection system

DGB

Drilling guide base

DH

Dry hole

DHDP

Downhole pressure and temperature

DHPT

Downhole pressure and temperature transducer

DHSV

Downhole safety valve, see also SCSSV.

Diapir

An up-thrust intrusion of lower-density rocks through overlying formations, e.g. a salt dome.

Differential pressure

The difference between the pressure in a well due to the mud column and the pressure in the surrounding rock at any point. See also sticking.

DIN

Deutsches Institut für Normung (German standards)

Dip

The inclination from the horizontal of the top surface of a geological structure OR measurement of the contents of a tank by lowering a weight and prepared line into it. See also tank dipping.

Dipmeter

An instrument that indicates dip relative to a well bore.

DIPS

Design & instrumentation of process systems

Directional drilling

Intentional deviation of a wellbore from the vertical. Although wellbores are normally drilled vertically, it is sometimes necessary or advantageous to drill at an angle from the vertical. Controlled directional drilling makes it possible to reach subsurface areas laterally, remote from the point where the bit enters the earth. It often involves the use of turbodrills, Dyna-drills, whipstocks, or other deflecting rods.

Disc™

Abrasion resistant spring choke control valve based upon a multiple flow paths formed by a stack of discs for use in severe service conditions or for increased service life including high pressure drops and the presence of sand.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Discovery well

A successful exploration well, or wildcat. The first successful well on a new prospective reservoir structure.

DISH

Deep installation of subsea hardware

Distillates

The products of distillation.

Distillation

The process of heating and “flashing” or boiling off successive fractions (component hydrocarbon substances) from a crude oil feedstock, or a product of earlier distillation.

Diverter

A safety device fitted in the early stages of a well, instead of a blowout preventer, to divert and vent off any shallow gas encountered.

DL

Density log. (Also DENL)

DMS

Data management system

DNV

Det Norske Veritas BV (Verification Authority)

Docking-Manifold

See KeyMAN™.

DOL

Direct on line method of connecting and starting electric motors.

Dome

A geological structure resembling an inverted bowl; a short and declined the plunges on all sides.

Dome plug trap

A reservoir formation in which fluid or plastic masses of rock material originated at unknown depths and pierced or lifted the overlying sedimentary strata.

DOT

Department of Transport

Down Dip

An area of structure where the top of the formation is lower (e.g. offshore, deeper below sea level) than the point under consideration.

Down Hole

Down a well. The expression covers any equipment, measurement, etc., in a well or designed for use in one.

Downstream

“Downstream” is a relative term (the opposite of “Upstream”) in oil industry operations. For instance, a refinery is “downstream” of a crude oil production unit, and a petrochemical unit, and a petrochemical plant usually downstream of a refinery. The term has also come to mean all operations occurring after the delivery or lifting of saleable quality crude or gas from the production unit or associated delivery terminal.

Downtime

A period when any equipment is unserviceable or out of operation for maintenance etc.

DP

Dynamic positioning OR dynamically positioned OR dew point OR design pressure OR drill pipe OR data processing OR drilling platform

DPVOA

Dynamic Positioning Vessel Owners Association (now part of IMCA)

Draft

The vertical distance between the bottom of a vessel floating in water and the waterline.

DRAMMS

Deepwater Reliability Availability and Maintenance Management System.

Drawdown

The difference between the static and the flowing bottom hole pressures. The distance between the static level and the pumping level of the fluid in the annulus of a pumping well.

Drawworks

The hoisting mechanism in drilling rig. It is essentially a large winch spools off or takes in the drilling line and thus raises or lowers the drill stem and bit.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Drill collar

A heavy, thick-walled tube, usually steel, used between the drill pipe and bit in the drill stem to provide a pendulum effect to the drill stem and weight to the bit.

Drilling Crew

The crew on a drilling rig is supervised by a senior drilling engineer, known as a "Toolpusher". Other members of the crew include the Driller, in charge of a shift, who ensures adherence to the drilling programme and maintenance of the shifts operating log, or "Tour Sheet". He controls the lifting mechanism and hence the weight on the bit (See Drill String). Other skilled members, or "Roughnecks" may be Motor Men, Derrickmen, Floor Men, Pump Men etc. Partly skilled members are known as "roustabouts". In addition a rig crew will incorporate such specialists as Mud Engineers and Well-Site Geologists.

Drilling fluid

Circulating fluid, one function of which is to force cuttings out of the wellbore and to the surface. Other functions are to cool the bit and counteract downhole formation pressure. While a mixture of barite, clay, water, and chemical additives is the most common drilling fluid, wells could also be drilled using the air, gas, water, or oil-base mud as the drilling fluid. See mud.

Drilling line

A wire rope used to support the drilling tools. Also called the rotary line.

Drilling mud

A specially compounded liquid circulated through the wellbore during rotary drilling operations. See mud.

Drilling out

When a well must be deviated or side-tracked, either as planned or to avoid a fish it is normally necessary to cut a hole in the casing wall and drill out on the new path.

Drilling report

Every twenty-four hours the Driller's log and the geological cuttings log, together with the observations of the Toolpusher and any other significant data are sent, usually by telex, to the Area Drilling Manager and other interested parties. The report will also include e.g. usage of materials, stock levels and requirements for supplies.

Drilling rig

Almost all drilling is now carried out by rotary rigs. The "Rig" comprises a derrick, a draw-works or source power, lifting tackles and blocks, a Kelly and rotary table to rotate the drill string, a mud pump and mud circulation system, a blow out preventer, and a system for handling drillpipe casing etc.

Drilling slot

See keyway.

Drilling tools

A term applied generally to any down-hole accessory including for instance stabilizers, jars, fishing equipment and directional drilling apparatus.

Drill pipe

A heavy, seamless tubing used to rotate the bit and circulate the drilling fluid. Joints of pipe approximately 30 ft (9 m) long are coupled together by means of tool joints.

Drill ship

A self-propelled floating offshore drilling unit that is a ship constructed to permit a well to be drilled from it. While not as stable as semisubmersibles, drill ships are capable of drilling exploratory wells in deep, remote waters. They may have a ship hull, a catamaran hull or a trimaran hull. See floating offshore drilling rig.

Drill stem

All members in the assembly used for rotary drilling, from the swivel to the bit, including the kelly, drill pipe and tool joints, drill collars, stabilisers, and various speciality items.

Drill string

The column, or string, of drill pipe with attached tool joints that transmits fluid and rotational power from the kelly to the drill collars and bit. Often, especially in the oil patch, this term is loosely applied to both drill pipe and drill collars. Compare drill stem.

DRL

Drill

DRLG

Drilling

Dry Gas

Natural gas, methane and ethane, without any significant content of heavier hydrocarbon fractions.

Dry Hole

An unsuccessful well. Sometimes called a "Duster".

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



DS

Directional survey

DSAW

Double submerged arc welded

DSC

Digital selective calling

DSCM

Dummy subsea control module

DSCS

Duplex self-cleaning strainer

DSEAR

Dangerous Substance and Explosive Atmosphere Regulations 2002

DSL

Direct shuttle loading

DSM

Diving safety memorandum

DST

Drill stem test

DSV

Diving support vessel

DSWP

Deterministic sea wave prediction

DT

Design temperature

DTD

Driller's total depth

DTI

Department of Trade and Industry (UK) <http://www.og.dti.gov.uk>

DTp

Department of Transport

DTU

Dry tree unit

Duster

A dry well drilled during exploration.

DV

Diverter Valve

DWO

Drilling with oil

DWP

Design working pressure

DWT

Dead weight tonnage (see above)

Dynamic positioning

A satellite monitoring system used to control the action of thrusters propellers to maintain a vessel on location without deploying anchors.

E

EAWR

Electricity at work Regulations 1989

EC

Commission of the European Communities

ECN

Engineering change notice.

Economic depletion

Progressive reduction in the value of a producing asset as a result of production. See also Depletion Allowance.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Economic zone

The area of the seabed over an adjacent state can claim rights of exploitation (currently up to 200 miles).

ECP

Emergency control point

EDC

Emergency disconnect

EDEA

European Drilling Engineering Association

EDP

Emergency depressurisation OR Electronic data processing OR Emergency disconnect package

EDS

Element data sheet

EDT

Eastern Daylight Time (USA & Canada)

EDU

Electrical distribution unit

EECS

Electrical Equipment Certification Service

EEM

Electrical equipment room

EEMUA

Engineering Equipment and Materials Users Association

E/E/PE

Electrical/electronic/programmable electronic

E/E/PES(s)

Electrical/electronic/programmable electronic system(s)

EEPROM

Electrical/electronic/erasable programmable read only memory

EER

Evacuation, escape and rescue

EERA

Evacuation, escape and rescue analysis

EFC

European Federation of Corrosion

EFL

Electrical flying lead

EH or E/H or E-H

Electro-hydraulic

EHDM

Electro-hydraulic distribution manifold

E/H MUX

Electro-hydraulic multiplexed

EI

Energy Institute, formed in 2003 by the merger of the IP and the InstE

EIA

Environmental impact assessment

EIC

Energy Industries Council <http://www.the-eic.com>

EIF

Environmental impact factor

EIS

Environmental impact statement (or study)

Electric Swivel

A powered swivel which rotates the drill stem from above the rig floor, thus replacing the Kelly and rotary table.

Electro-Drill

A bit powered by an electric down-hole motor which operates without the need to rotate the drill string.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Elevators

A clamp used in a drilling rig to latch onto the grip drill pipe, casing etc when lifting them.

ELEX™

Alpha Thames' subsea, wet-mateable, high-voltage, high-power, three-phase, electrical connector. Uniquely, it utilises an external fluid exchange mechanism (FxM™) to remove the entrained (sea) water and it maintains the electrical connections in a one-atmosphere inert dry, clean gas environment, thereby eliminating the long-term concerns of electrical breakdown associated with other subsea electrical connector designs.

ELI

Earth loop impedance

EMI

Electromagnetic interference

Emulsion

A mixture in which one liquid, termed the dispersed phase, is uniformly distributed (usually as minute globules) in another liquid, called the continuous phase or dispersion medium. In an oil-water emulsion, the oil is the dispersed phase and the water the dispersion medium; in a water-oil emulsion, the reverse holds. Emulsion is a typical product of oilwells. Water-oil emulsion is also used as a drilling fluid.

EN

Euronorme (standard)

Enhanced oil recovery

A means used to assist in the extraction of oil either by installing equipment into the production tubing or by injecting water or gas into the reservoir.

Entrained Oil/Gas

Small amounts of oil which may form part of a gas stream, due to the difficulties of separation at source. Similarly gas may be entrained in a stream of other fluids.

Env

Environmental OR environmental category.

EOR

Enhanced oil recovery

EPA

Environmental Protection Agency (USA)

EPC

Engineering, procurement and construction

EPDM

Ethylene propylene diene monomer

EPIC

Engineering, procurement, installation and construction. An all-in contract for Engineering Procurement and Construction. In the many variants such as EPCI, Feed, etc. "I" normally signifies Inspect or Install, and "F" signifies Fabricate.

EPIRB

Emergency position indicating radio beacon

EPR

Explosion protection review OR Ethylene propylene rubber

EPROM

Erasable programmable read only memory

EPS

Emergency power supply

EPU

Electric power unit

EQ

Engineering query

EQD

Emergency quick disconnect

EQDP

Emergency quick disconnect package

Equity Crude

Crude oil belonging directly to the equity participant in the oil field, as opposed to "Farmers crude", royalty oil, Government participation crude, etc.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



- ER** Extended reach
- ERA** Electrical Research Association
- ERD** Engineering reference document (Shell Expro) OR extended reach drilling
- ERP** Emergency radio point
- ERRVA** Emergency Response and Rescue Vessel Association
- ESD** Emergency shut down OR electrostatic discharge.
- ESDP** Emergency shut down panel
- ESDV** Emergency shut down valve – an automatically operated, normally open valve used for isolating a subsea pipeline.
- ESP** Electric submersible pump
- ESS** Expandable Sand Screen
- ESSA** Emergency Systems Survivability Analysis
- ETD** Embedded temperature detector
- ETDE** Energy Technology Data Exchange
- ETLP** Extended tension leg platform
- ETTF** Expandable Tubular Technology Forum
- EU** European Union
- EUT** Equipment under test
- EVA** Ethylene vinyl acetate
- EW** Exploratory well
- EWT** Extended well test
- Ex** Symbol which signifies the certified use of electrical equipment in hazardous locations e.g. Ex(d) explosion proof.
- Expansion Loop** A bend or loop installed in a length of pipeline to absorb longitudinal expansion with changes in outside temperature, the passage of hot oils, etc.
- Exploitation** The development of a reservoir to extract its oil.
- Exploitation well** A well drilled to permit more effective extraction of oil from a reservoir e.g. an oil or gas producer, or gas or water injector to support production. Sometimes called a development well (see development well).
- Exploration** The process of identifying a prospective hydrocarbon region and structure, mainly by reference to regional, and specific geochemical, geological and geophysical (seismic) surveys, including core testing, and the drilling of wildcats.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Exploration well

A well drilled to test a potential but unproven hydrocarbon trap or structure where good reservoir rock and a seal or closure combine with a potential source of hydrocarbons. Also called a wildcat (see wildcat).

F

°F

Degrees Fahrenheit. $1^{\circ}\text{F} = 0.556^{\circ}\text{C}$

Facies

In geology, the "appearance" and hence the composition and characteristics of a rock formation. Cores are taken from a well, for example, so that the reservoir facies can be studied. A Facies Trap for hydrocarbons is one in which the seal or closure is provided by a change in rock characteristics, a form of stratigraphic trap.

Fail-safe

Equipment that will leave a system in a safe condition in the event of a power failure.

F&G

Fire and gas

FARSI

Functionality, availability, reliability, survivability and interaction.

FAT

Factory acceptance test(s)

Fault/Fault Block

A discontinuity in a rock formation caused by fracturing of the earth's crust. There are various causes of fault-fractures such as the movement of "tectonic plates" relative to each other. In oilfield terms a Fault Block is a compartment of a rock formation surrounded or partly surrounded by faults, which may have sealed in hydrocarbons separately from the rest of the formation.

Fault

A break in subsurface strata. Often strata on one side of the fault line have been displaced (upward, downward, or laterally) relative to their original positions.

FB

Full bore

FBE

Fusion bonded epoxy

FBHP

Flowing bottom-hole pressure

FCV

Flow control valve

FD

Formation density

FDM

Frequency division multiplex

FDS

Functional design specification

FEA

Facilities Engineering Association OR Finite element analysis OR Fire and explosion analysis

FEED

Front end engineering design; an early phase of oil field development (see also Prospect screening and Proposals)

FES

Fire and explosion strategy

FFD

Full field development

Field

See Oilfield. A field may also be a gas or gas condensate field.

Filter Cake/Filtrate

Build up of mud solids or filtrate on the wall of a well. This helps seal and stabilise the rock face, but too much can cause sticking of the drill string. See also Differential Pressure.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Fines

Small particles of rock or other solid.

Fingering

Uneven advance of water and/or gas towards an oil well due to inconsistent permeability in the reservoir. When the finger reaches the well oil will tend to be excluded.

Finger Printing

Crude oil is a mixture of hydrocarbon components or fractions and other minerals. The composition of each crude is different in consequence, leading to differences in gravity, etc. Nowadays, the source of a crude – e.g. an oil-spill – can be determined by analysis known as “finger printing”

Fireflooding

A form of Enhanced Oil Recovery in which otherwise unproduceable heavy oils are ignited in the reservoir. The cracking effect enables resulting lighter fractions to be recovered.

Fire loop

A pneumatic control line containing temperature sensing elements (fusible plugs, synthetic tubing, etc.) which, when activated, will initiate a platform shutdown.

First end connection

A term used to describe the first end connection of a reeled pipeline or umbilical, as against the second end connection.

Fiscal metering

The accurate measurement of oil, gas or condensate flow rate for taxation purposes.

Fish

An unwanted object down a well, commonly the lower end of a drill string which has broken off.

Fishing

Fishing is trying to recover the Fish, using various attachments to the drill stem or wireline, known as fishing tools.

FIT

Factory integration test

Five-Spot Waterflood

A standard method of development where a production well is surrounded by four water injection wells to “sweep” the maximum amount of oil towards the producer.

Fixed installation

A fixed offshore structure involved in the production of oil and gas and which may be constructed of steel or concrete. A term frequently used in the UK to describe an offshore installation.

Flame-Jet Drilling

The use of a rocket-fuel flame to penetrate rock by fusing (melting) it. The flame also glazes and seals the walls of the well with fused rock.

Flange Up

To connect; to complete; to put into operation.

Flare

A vent for burning off unwanted gases or to burn off hydrocarbons which due to temporary malfunction or maintenance of process plant, cannot be safely stored or retained in process vessels.

Flare stack

An elevated tower containing a pipe used for the discharge and burning of waste gases.

Flash drum

A pressure vessel used to lower the pressure of oils and other liquids involved with the production processes in order to encourage the vaporisation of dissolved gases.

Flash Off

To vaporize or “boil off” a hydrocarbon by heating.

Flash Point

The lowest temperature at which a vapour will burn or explode when ignited.

FLC

Full load current of an electrical load measured in amperes.

FLNG

Floating liquefied natural gas plant

FLOAct™ Actuator

Alpha Thames’ pressure-balanced, subsea, electric, linear actuator that is unique in that it is the first subsea electric actuator available with the performance required for the actuation of choke valves

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Float/Floating Casing

A method of inserting heavy lengths of casing into a well without overstressing joints and seals due to the weight of the total string. The bottom end is sealed, and the hollow string then becomes buoyant in the drilling fluids in the well, which are gradually displaced. Afterwards the seal is drilled out and the casing cemented into place.

Floater

See floating offshore drilling rig.

Floating offshore drilling rig

A type of mobile offshore drilling unit that floats and is not secured to the seabed (except for anchors). Floating units include inland barge rigs, drill ships, ship-shaped barges and semisubmersibles. See mobile offshore drilling unit.

Floating Production Facility (FPF)

A vessel designed to provide offshore field production control and processing for smaller fields, more cheaply than a fixed platform. The tension-leg platform is specifically designed to meet this need in deeper waters but transport barges, semi-submersible drilling rigs, and tankers are all capable of modification for the purpose depending on water depth and environment.

Floating Production Storage and Off Loading Vessel (FPSO)

A versatile and relatively low-cost Floating Production Facility for small, difficult isolated or deep water reservoirs.

Float Out

The launch or leading out of jackets or other structures for installation offshore, on a Flotation barge or other vessel, or in some cases using their own buoyancy.

Flotation

Flotation barge or other vessel, or in some cases using their own buoyancy.

Flotation Cans

Are hollow tanks attached to a jacket to assist buoyancy or help control the lowering to the seabed.

Flocculant

A substance added to a suspension to enhance aggregation of the suspended particles.

Flocculent

Aggregated in woolly cloud like masses (e.g. a flocculent precipitate).

Flood

To let or pump water into ballast tanks. See also Waterflood and Fireflood.

Flour.

Fluorescence

FlowCap™

A non-processing System-Module within an AlphaCPU™, comprising piping flow-loops to provide for bypass control.

Flowing Bottom Hole Pressure

Bottom hole pressure measured at a given flow rate.

Flowline

The pipe through which produced fluid travels from a well to a manifold, to processing equipment or to storage.

Flowline Bundle

An integrated assembly of production flowlines, and hydraulic and/or electrical control lines, connecting a subsea/satellite well to its parent installation.

Flowmeter

A meter to measure the rate at which a fluid passes a given point.

FLP

Flowline pressure or flameproof. (see Ex)

Fluid

A generic term meaning gas, vapour, liquid, or a combination thereof.

Flush Phase

The primary production phase of a reservoir.

Footage/Footage Rate

Penetration rate in drilling. Footage Rate may also be a form of remuneration under a drilling contract. Often referred to as a ROP (Rate of Penetration).

Footprint

The limit of radius of action of an underwater vessel or vehicle. OR The impact/impression on the seabed of a jack-up facility OR the O/A plan dimensions of an item of equipment.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Formation

A rock deposit or structure of homogeneous origin and appearance.

Formation Damage

Damage to the reservoir around a well due to e.g. plugging with mud, infiltration by water from the well, crumbling under pressure or high flow rate, etc.

FM

Frequency modulation

FMA

Fracture mechanics assessment

FMEA

Failure mode and effects analysis

FMECA

Failure mode, effects and criticality analysis

FoS

Factor of Safety

Foundation Pile

The first casing or conductor string (generally with a diameter of 30 to 36 inches) set when drilling a well from an offshore drilling rig. It prevents sloughing of the seabed formations and is a structural support for the permanent guide base and the blowout preventers.

FPA

Fire Precaution Act 1971 (UK)

FPAL

First Point Assessment Ltd <http://www.fpal.co.uk>

FPF

Floating production facility

FPO

Field purchase order

FPP

Floating production platform

FPS

Floating production system

FPSO

Floating production, storage and off-loading (vessel).

FPDSO

Floating production, drilling, storage and offloading (vessel).

FPV

Floating production vessel

FR

Flow recorder OR final report

FRA

Fire risk analysis

Fracturing

The process of cracking open the rock formation around a well bore to increase productivity. This is normally done by applying hydraulic pressure down the well bore.

FRAMS

Floating riser and mooring system

FRC

Fast rescue craft

Free-water knockout

A vertical or horizontal vessel into which oil or emulsion is run in order to allow any water not emulsified with the water oil (free water) to drop out. See also FWKO.

FRO

Full range output

FS

Feedstock

FSA

Formal Safety Assessment

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS

**FSD**

Full scale deflection of measuring instruments

FSIP

Final shut-in pressure

FSK

Frequency shift keying used in communication signals

FSO

Floating storage and off-loading (vessel)

FSU

Floating storage unit

FSW

Feet of seawater

FTP

Flowing tubing pressure

Fuel Oil

The "bottom" or "heavy end" of the barrel after removal of middle distillates and lighter fractions. There are various grades of Light and Heavy Fuel Oil.

FW

Fresh water OR feed water

FWHP

Flowing wellhead pressure

FWHT

Flowing wellhead temperature

FWKO

Free water knockout. See knockout.

FxM™

The Fluid Exchange Mechanism that expels and replaces seawater, in the ELEX™ Connector enclosure, with a dry, clean, inert gaseous atmosphere. The FxM™ is located external to the ELEX™ Connector.

G

GA

General alarm OR general arrangement (drawing).

GAF

Gross acre-feet

Galv

Galvanised

Gas Cap/Gas Cap Drive

The natural accumulation of associated gas in the top of an oil reservoir. Gas Cap Drive, or primary production utilizes the pressure and expansion of this gas to drive the oil to the surface. Sometimes called Depletion Drive.

Gas Chromatography

A very accurate laboratory method of separating and analysing the components of a volatile hydrocarbon mixture.

Gas Column

See Oil Column/Gas Column.

Gas Condensate

Light hydrocarbon fractions entrained in gas production which condense into liquid when brought to the surface. Changes in reservoir pressures as result of production may cause it to condense in the reservoir, when much of it may become irrecoverable. See Retrograde Condensation.

Gas Injection

A secondary recovery method by which gas is injected into and passed through the reservoir to maintain pressure and/or entrain heavier hydrocarbons left behind by primary production. The reservoir can in this way also serve as storage for produced gas until the reservoir pressure can be reduced, and the gas sold.

Gas Kick

Increase of down hole pressure above that exerted by the column of drilling fluid in a well, allowing as to escape to the surface. If not, controlled this could develop into a Blowout.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Gas lift

The process of lifting fluid from a well by injecting gas down the well through the tubing - casing annulus. Injected gas aerates the fluid to reduce its SG thereby overcoming the static head of fluid in the wellbore allowing the well fluid to be produced to the surface. Gas may be injected continuously or intermittently depending on the producing characteristics of the well and the arrangement of the gas lift equipment.

Gas Oil

A middle distillate product fraction.

Gas/Oil Ratio (GOR)

The proportional amount of gas to oil liquid occurring in production from a reservoir, usually expressed as cubic feet per barrel.

Gasser

A gas well.

Gate

Used to describe one type of isolation valve.

GBS

Gravity base structure

GCPD

Gallons of condensate per day

GCR

Gas/condensate ratio

GDT

Gas down to

Geochemical Survey

Analysis of the hydrocarbon-bearing potential of an area by studying shallow cores and subsurface water for evidence of seepage or kerogens.

Geology/Geologist

The study of the history of the earth and its rocks. The geologists in the oil and gas industry tend to specialise in Sedimentology, Palaeontology and other branches of the science relating directly to prospectivity for hydrocarbon deposits.

Geophones

Sound wave receivers primarily for onshore seismic surveys. See also Hydrophone.

Geophysics/Geophysicist

Physics applied to the measurement of the earth and study of its composition. A Geophysicist in the oil and gas industry usually specialises in the interpretation of seismic survey data.

Geothermal Gradient

The increase of temperature with depth in the earth's crust. (About 2 F°. per 100 feet).

GI

Gas injection

GIS

Geographic information system

GJ

Gigajoules

GLR

Gas/liquid ratio

Gm/cm³, gm/cc, g/cm³

grams per cubic centimetre

GOC

Gas/oil contact

GoM

Gulf of Mexico

GOR

Gas/oil ratio

GPA

General platform alarm

GPD

Gallons per day

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS

**GPH**

Gallons per hour

GPM

Gallons per minute

GPS

Global positioning system OR Geometrical product specification

Graben

A structure which has become displaced downward from its original surrounding geological setting.

Gr. API

Gravity – Degrees API

GRN

Goods received note

Grass-Roots

Description of a refinery or other development project where there is no existing plant or infrastructure – i.e. construction on a “green field” site.

Gravel Pack

Where the producing formation in a well is crumbling or caving into the well bore and plugging the perforations, the cavity so formed is filled with fine gravel, which supports the formation, and keeps the interior of the well clean.

Gravimeter

An instrument which measures minute variations in the earth’s gravitational pull at different surface points due to the density of the underlying rocks. A gravimetric survey uses this principle in the search for sedimentary rocks which normally have a relatively low density.

Gravimeter

An instrument which measures differences in the specific gravity of liquids, and is used to identify interfaces between batches of different products in a pipeline.

Gravity Platform/Structure

Offshore platforms etc., which rely on weight alone to keep them stable and in place. They are frequently made of concrete with steel as a major component. Steel gravity structures are also used. Structures of such size are floated into position, the buoyancy being provided by hollow chambers in the large base of the platform. Subsequently these are flooded with water, and can be used for oil storage.

Gravity survey

An exploration method in which an instrument that measures the intensity of the earth's gravity is passed over the surface or through the water. In places where the instrument detects stronger or weaker than normal gravity forces, a geological structure containing hydrocarbons may exist.

GRE

Glassfibre reinforced epoxy

Grout

A mixture of cement and water (no sand) used to secure and seal attachments such as piles into jacket legs.

GRP

Glass reinforced plastic

GRVE

Glassfibre reinforced vynilester

GST

Geosteering tool

GTL

Gas to liquid

Guide Base/Lines/Posts

The seabed framework or template through which a subsea well is drilled. It is fitted with Guide Posts from which Guide Lines extend to the surface, and enable the wellhead to be located ready for drilling, and for installation and control of e.g. the Blowout Preventer.

Guyed-tower platform rig

A compliant offshore drilling platform used to drill development wells. The foundation of the platform is a relatively lightweight jacket upon which all equipment is placed. A system of guy wires anchored by clump weights helps secure the jacket to the seabed and allows it to move with wind and wave forces. See platform rig.

GUM

Guide to the expression of uncertainty in measurement

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



GVF

Gas volume fraction OR gas void fraction.

GW

Gas well OR gallons of water

GWC

Gas/water contact

GWP

Global warming potential

H

H₂S, H2S

Hydrogen sulphide, deadly sour gas.

Hanger

See Casing and Tubing.

Hanging-in the Casing

Tensioning a string of casing which cementing by letting it hang from the wellhead. This helps to offset later expansion due to the passage of hot fluids.

Hanging in the Slips

Suspended drill string or casing from slips or wedges placed in the rotary table.

HAT

Highest astronomical tide level OR Harbour acceptance trials

HAZ

Heat affected zone (around a weld) where the base metal has not been melted but whose mechanical properties or microstructure have been affected by the heat generated during the welding process.

HAZAN

Hazard analysis

Hazardous Area (location)

An area where volatile gases or substance exist or may exist and only certified electrical equipment can be used and where a 'permit to work' situation exists.

Hazard Zone

An area where special safety precautions apply.

HAZID

Hazards in design analysis

HAZOP

Hazard and operability analysis

HB

Brinell hardness

Header

A pipe into which several smaller diameter pipes feed fluid into or feed from fluids.

HC

Hydrocarbon

HCFC

Hydrochlorofluorocarbons

HCLS

Heave compensated lift system (see Heave Compensator)

HDPE

High density polyethylene

Heat Exchanger

A process vessel which typically uses the passage of one fluid through a set of internal tubes to heat up or cool down another fluid in which they are immersed. There are many different designs and uses.

Heave

The vertical motion of a floating vessel or platform with the waves.

Heave Compensator

A Heave Compensator is installed on a crane on floating drilling rigs to counteract this movement with regards the drillstring and marine conductor or installation/recovery of other equipment or structures.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Heavy Ends

Heavy or residual fractions of a feedstock after distillation, etc. Sometimes referred to as the "bottom" or "heavy end" of the barrel.

Heavy Oil

See Crude Oil.

HeliC™

Abrasion resistant spring choke control valve based upon a helically shaped orifice for use in severe service conditions or for increased service life including high pressure drops and the presence of sand.

Helipad

A Helicopter landing deck or onshore landing area.

HF

High frequency

HFO

Heavy fuel oil

HGOR

High gas/oil ratio

HGT

High-pressure grease tube

High (Geological)

The part or parts of a geological structure which are nearer to surface datum/sea level. Hydrocarbons tend to accumulate in "Highs". The term is also used on a regional basis, where rocks of one geological era are nearer the surface over a broad area.

HIP

Hot Isostatic Processing (moulding technique)

HIPPS

High-integrity pressure (or pipeline) protection system. It is a pressure system with voting logic that activates a fast-acting isolating valve to protect pipelines which are not designed to withstand the maximum pressure conditions.

HIRA

Hazard identification and risk assessment

HLA

High level alarm

HLSD

High level shut down

HMP

Hazard management process

HMPE

High molecular polyethylene (rope)

HMSO

Her Majesty's Stationary Office

HO

Heating oil OR heavy oil

Hold Up

The quantity of hydrocarbons which is retained, in normal operations, in the process lines and vessels of a plant.

Hole opener

A device used to enlarge the size of an existing borehole, having teeth arranged on its outside circumference to cut the formation as it rotates.

Hole Temperature

Formation temperature at a given depth in a well.

Holiday

A discontinuity in a coating, which exhibits electrical conductivity when exposed to a specific voltage.

Horizon

The formation at a given depth in a well, usually identified by geological age, i.e. "Middle Jurassic Horizon".

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Horizontal Drilling

A technique for deviating wells through up to 90° from the vertical, but more importantly, "horizontal" to the reservoir strata. While the main purpose of normal deviated drilling is to "reach" remote parts of a reservoir, with horizontal drilling the purpose is to keep the well bore within a given productive horizon or formation, to increase potential productivity.

Horst

A structure such as a fault-block, which has become up-thrust from its original surrounding geological setting.

Hot Tap

Inserting a branch line into a pipeline or vessel which is still in operation.

HP

High pressure OR hydrostatic pressure OR horse power

HPHT or hp/t

High pressure, high temperature

HPU

Hydraulic power unit

hrc

High rupturing capacity (used for electric fuses)

HSC

Health and Safety Commission

HSE

Health & Safety Executive (UK) OR Health, safety and environment (in NORSOK Std)

HSSE

Health, security, safety and environment

HSWA

Health and Safety at Work Act (1974)

HT

High tension

HTSD

High temperature shut down

HUC

Hook-up and commissioning

Hundred Year Storm

For construction design purposes, the worst weather conditions that can be statistically predicted within a hundred-year period.

HV

High Voltage or Vickers hardness

HVAC

Heating, ventilation and air conditioning

HVC

High voltage connector(s)

HXT

Horizontal Christmas tree

Hydrates

Ice-like compounds formed of water with another substance, e.g. natural gas, in well bores or in a pipeline at certain combinations of pressure and temperature, which may cause a blockage stopping production.

Hydrocarbons

Organic compounds of hydrogen and carbon, whose densities, boiling points and freezing points increase as their molecular weights increase. Although composed of only two elements, hydrocarbons exist in a variety of compounds because of the strong affinity of carbon atoms for other atoms and for itself. The smallest molecules of hydrocarbons are gaseous; the largest are solids. Petroleum is a mixture of many different hydrocarbons.

Hydrocyclone

A separation device that utilises centrifuging principles to remove oils from water, or as a multicyclone to remove liquids and solids from a gas stream.

Hydrophones

The instruments which detect returning sound waves in offshore seismic surveys/sonar operations.

Hydrostatic Pressure/Head

The pressure exerted by a column of liquid at a given depth, such as that exerted by drilling fluid in a well.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Hydrostatic Testing

Pressure-testing vessels on piping systems by pumping water into them.

Hyperbaric Welding/Chamber

Welding under high pressure conditions, i.e. subsea in an air chamber (Hyperbaric Chamber) similar in principle to a diving bell. Hyperbaric chamber is also the name given to a pressurised surface chamber or habitat in which returning deep divers are gradually re-acclimatised to surface pressure.

HYSYS

A proprietary process systems software analysis program

Hz

Hertz, unit of frequency (1 Hz = 1 cycle/second)

I

IAODC

International Association of Offshore Diving Contractors (now part of IMCA)

Ibama

Brazil's environmental agency

ICC

Installation Control Centre

ICL

Instrument checklist

ICP

Independent, competent person

ICRP

International Commission on Radiological Protection

ICS

Intervention control system

ID

Internal diameter

IDC

Inter-disciplinary check

IDCN

Integrated data communications network

IDMTL

Inverse definite minimum time lag

IEA

International Energy Agency

IEC

International Electrotechnical Committee

IFA

Issued for action

IFR

Interface review

IG

Imperial gallons (also Imp. Gal) (i.e. UK gallons)

Igneous rock

A rock mass formed by the solidification of material poured (when molten) into the earth's crust or onto its surface. Granite is an igneous rock.

II

Injectivity index

ILSU

Interface/line switching unit

IMCA

International Marine Contractors Association (formed in 1995 from the IAODC and the DPVOA)

IMIS

Integrated maintenance information system

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



IMO

International Maritime Organisation

Imp. Gal

Imperial gallons (also IG) (i.e. UK gallons)

Impermeable Rock

A rock with restricted or poorly-communicating pore spaces, such that hydrocarbons will not flow through it.

Impressed Current Protection

The active, or 'Anodic' method of preventing corrosion in submarine steel structures. Unlike the cathodic protection system, the self-potential of the structure is counteracted by passing a large low voltage current through the surface to be protected.

IMR

Inspection, maintenance and repair

IMV

Injection master valve

INA

Information not available

Inclinometer

A down-hole instrument for measuring the angle from the vertical or 'slope' of a deviated well.

Inert Gas

Chemically unreactive gases used to flood compartments where there is fire or imminent danger of fire. Inert gases are also used in the mixture breathed by divers.

Infill Drilling

Production wells drilled between existing wells to increase recovery of hydrocarbons.

Inhibited Mud

Mud containing chemicals to prevent loss of water which could damage surrounding formations, and cause build up of filter-cake in the well. See Differential Pressure.

Injection Well (Injector)

Sometimes called an 'input' or 'service' well. A well through which water or gas is injected to maintain reservoir pressure and improve 'sweep' or a real recovery of reserves.

INMARSAT

International marine satellite

In Place

Description of the total hydrocarbon content of a reservoir, as distinct from 'Reserves' which can be 'recovered' or produced. Oil or gas in place (OIP, GIP) before the start of production is known as Oil or Gas Originally in Place or Initially in Place. (e.g. STOOIP = Stock Tank Oil Originally in Place; GIIP = Gas Initially in Place).

Inside Preventer

A blowout preventer which is fitted to the inside of the drill-string.

Installation

Fixed or mobile, used directly or indirectly for the exploration or production of mineral resources. A fixed installation is a permanent offshore structure that is involved in the production oil or gas which may be constructed of steel or concrete.

InstE

Institute of Engineering, merged with the IP in 2003 to form the Engineering Institute (EI)

Instrument Pig

A pipeline pig fitted with monitoring and gauging devices to check pipe wall thickness and for damage or distortion of the line.

Interface

The term is widely applied in the oil and gas industry as in other industries. However, usage specific to products is in the interface between two batches of different products in a pipeline system. Unless separation is critical and maintained by an intervening pig or sphere, the products are allowed the small amount of commingling that occurs, and the combined product or 'interface' is drawn off separately at its destination.

Intermediate String

See Casing.

Intrinsically safe

Electrical equipment which (due to its low power) is incapable of igniting a flammable gas mixture or combustible materials.

IODP

Integrated Ocean Drilling Program

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



IP

Institute of Petroleum merged in 2003 with the InstE to form the Energy Institute (EI) OR Ingress protection
OR Initial pressure

IPAA

Independent Petroleum Institute of America (see also API, AIP and IP)

IPE

International Petroleum Exchange

IPSA

Interactive power system analysis

IPU

Integrated pipeline umbilical OR Integrated production umbilical

IQA

Institute of Quality Assurance

IR

Injection rate

IRCD

Injection rate control device

ISA

Instrument Society of America OR Independent safety auditor

ISM

International Safety Management (regulations/code for shipping)

ISO

International Standards Organisation

Isobath

A line connecting points on the sea bed of equal depth below the surface – a sea bed contour line OR In mapping subsurface geology, a line connecting points on the top of a formation of equal depth below surface datum/sea level.

Isochore

In a reservoir a line joining points of equal vertical thickness.

Isomers

Compounds which have the same number and types of atoms in each molecule but differ in molecular structure, e.g. Butane and iso-Butane, Octane and iso-Octane, etc. See Section 10.

Isopach

A line joining points of equal stratum thickness. Reservoir formations are sometimes mapped in this way.

ISU

Integrated services umbilical

IT

Information Technology

ITT

Invitation to tender

IW

Injection well

IWIS

Intelligent Well Industry Standards

IWOCS

Installation/workover controls system

IWV

Injection wing valve

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



J

J

Joule. Unit of work, energy and heat-transfer. 3.6MJ=1kWh. 2.6845MJ=1hph

J&A

Junked and abandoned

Jacket

Steel framework used to support platform topsides

Jack Rabbit

A gauge which is run through casing or tubing before use to check for correct sizing and freedom from obstruction or distortion.

Jack-Up Rig

Drilling rigs, production barges, etc. which once floated onto location can raise themselves clear of the water by 'jacking' themselves up their legs. They then offer the operating advantages of fixed platforms but unlike piled steel structures, their stability and load capacity depends on the strength and stability of the sea bed, and closely underlying strata.

Jars

Down hole tools inserted in the drill-string when fishing to jerk or jar the fish free by repeated sudden blows. They may also be used while drilling to avoid the drill-string becoming stuck.

JB

Junction box

Jettison

The disposal of water into the environment when it has been sufficiently cleaned; the requirement is 10 to 40 ppm oil in water in the North Sea depending on the particular area and the source

JIP

Joint Industry Project

JIT

Just-in-Time

JOA

Joint operating agreement The document governing operations in a Joint Venture, or prime importance to all participants as under it they secure, or may lose, rights to production etc. A typical Joint Operating Agreement will include sections to cover most or all of the following topics:

- Scope, duration, legal status
- Interests rights and duties of the operator and other participants
- Management structure and voting procedure
- Approval of operating programmes and budgets
- Cash contributions, costs and accounting
- Control and custody of joint properties and equipment
- Sole risk, default, withdrawal, assignment, etc.
- Disposal of Petroleum
- Confidentiality, force majeure, litigation, etc.

Joint

A single length of drill pipe, drill collar, casing or tubing, usually from 20 to 30 feet (6 to 9 m) long, that has threaded connections at both ends. Several joints screwed together constitute a stand of pipe.

Joint Venture

A common form of risk-sharing in Oil and Gas operations, especially exploration and production. Although they may have many of the characteristics of partnerships and are often referred to as such, they are usually legally constituted specifically to avoid partnership implications. See also Joint Operating Agreement.

JSA

Job safety analysis

JT

Joule Thompson. The Joule Thompson effect (also known as the Joule-Kelvin effect) is the change in temperature that occurs when a gas expands from a high pressure area to a low pressure area, such as across a valve. In the case of a hydrocarbon gas, a significant temperature drop can be experienced.

J-tube

An open-ended, J section pipe attached to a jacket structure or to a pipelay vessel to provide a means of installation and protection for flexible flow lines and umbilicals.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



J-T valve

A throttle valve used to reduce the pressure and temperature of a gas stream, associated with the NGL removal process

Jug

A geophone. A 'jug hustler' is the member of a land seismic survey crew who places and retrieves geophones. OR Artificially made cavern storage in a salt rock formation.

Junk

Any small unwanted object 'lost' down a well. Junk may be a lost bit, milled pieces of pipe, wrenches or any relatively small object that must be fished out of the hole.

Junk basket

A fishing tool run in the well when it is necessary to retrieve small parts or lost tools.

Jurassic

Rock formed in the second period of the Mesozoic era, between the Triassic and the Cretaceous periods. (from the French, after the Jura mountains).

JV

Joint venture

K

k

10³, kilo, thousand (Europe) OR knot (nautical mile per hour)

KB

Kelly bushing (see below)

KBM

Kelly bushing measurement

Kelly

The heavy steel member, three-, four-, six- or eight-sided, suspended from the swivel through the rotary table and connected to the topmost joint of drill pipe to turn the drill stem as the rotary table turns. It has a bored passageway that permits fluid to be circulated into the drill stem and up the annulus or vice versa.

Kelly bushing

A special device that, when fitted to the master bushing transmits torque to the kelly and simultaneously permits vertical movement of the kelly to make hole. It may be shaped to fit the rotary opening or have pins for transmitting torque. Also called the drive bushing. See Kelly.

Kelly Cock

An emergency 'blowout preventer' valve inserted between the swivel and the Kelly.

Kelly Spinner

A mechanism attached to the swivel for rotating the kelly in or out of the top joint of drill pipe, e.g. when adding another stand.

Kelly Valve (Lower)

An automatic valve at the lower end of the Kelly which closes when the Kelly is disconnected from the drill-stem, preventing spillage of mud.

Kerogens

Organic material from which oil or gas matures with time, under burial temperatures and pressures. They differ with origin – e.g. marine seaweeds, or terrestrial trees. Of the marine types, the presence of Algal Sapropel and Way Sapropel in a formation is prospective for oil, while of the terrestrial types, Vitrinite is generally prospective for gas, and Inertinite is not prospective. In addition the degree of reflectivity of Vitrinite samples is used as an indication of the maturity of a formation for the presence of hydrocarbons.

KeyMAN™

A standardised manifold system that is pre-configured to accept the connection of AlphaCPU™ System-Modules™. These System-Modules™ having any internal configuration from FlowCAP™ to System-Module™ Separation.

Keyway

A slot in the edge of the hull of a jackup drilling unit through which drilling tools are lowered and removed from the well being drilled.

KHI

Kinetic hydrate inhibitor

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Kick

An entry of water, gas, oil or other formation fluid into the wellbore during drilling. It occurs because the pressure exerted by the column of drilling fluid is not great enough to overcome the pressure exerted by the fluids in the formation drilled. If prompt action is not taken to control the kick, or to kill the well, a blowout may occur.

kg, km, kV

kilo- gram, metre, Volt (kilo = 103)

Kick-off

To bring a well into production OR To start the planned deviation of a well from the vertical. The depth at which this occurs is the Kick-Off Point (KOP).

Kill a well

To stop a well from producing so that surface connections may be removed for well servicing or workover. It is usually accomplished by circulating water or mud to load the hole and render it incapable of flowing.

Kitchen

A colloquial term for rock deposited, in conditions rich in organic sediments, which with the necessary burial history has become a significant source of hydrocarbons. These may have migrated to traps elsewhere.

Knock-Out Drum

A tank or vessel used to separate water from oil or liquids from a gas stream.

knot

1 nautical mile/hour

Knuckle Joint

An universal joint in a drilling tool for deviated drilling which enables the bit to rotate at an angle to the existing borehole.

KO

Knockout OR kicked off (deviated well)

KOP

Kick-off point

kPa

kilopascals

ksi

Thousands of pounds per square inch (See psi)

KW

Killed well

kW

Kilowatt, a unit of measurement for electrical power

L

LA

Level alarm

Landing Casing

Lowering a string of casing into a well, to rest on the 'step' in the hole where drilling at a smaller diameter commences.

LAT

Lowest astronomical tide level

Lay barge

A barge used in the construction and placement of underwater pipelines. Joints of pipe are welded together and then lowered off the stern of the barge as it moves ahead.

lb

pound; the plural is also lb (libra, libræ)

lbf

pound(s) force

lbf/in²

pounds (force) per square inch (psi)

LC

Lost circulation (drilling fluid) OR level controller

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS

**LCC**

Life cycle cost

LCP

Local control panel

LCV

Level control valve

LD

Laid down OR Loop Diagram

LDDP

Laid down drill pipe

Lean Gas

Gas undersaturated with hydrocarbons, and able to absorb more. See also Fat Oil/Lean Oil.

Lease

In the oil and gas industry, a legal instrument giving the right to explore/exploit acreage, primarily onshore. 'Lease operations' has come to mean any exploration/production field operation.

LED

Light emitting diode

LEL

Lower explosive limit; the lowest concentration by volume of combustible gases in mixture with air that can be ignited at ambient temperature conditions.

Lens

A body of potential reservoir rock enclosed on all sides by sealing strata, so-called because frequently lens-shaped.

LIC

Level indicator controller

Licence

A right to explore for and/or produce hydrocarbons issued by a Government agency, where rights to underlying minerals are not the property of the landowner. Exploration, drilling, development, etc. may be licensed separately, over varying lengths of time. Many licences require part-relinquishment of acreage after an initial period or "primary term" and make the operations subject to the hydrocarbon policy of the country concerned. OR Various other forms of permit or authorisation affecting operations.

LIFT

Licence Initiative for Trading <http://www.uklift.co.uk>

Lifting

Collection of a production shipment of crude oil etc. at the point of sale. Also covers bulk e.g. movements of any hydrocarbon against, e.g. contract entitlements OR Stimulating production flow from a well. See Gas Lift.

Light Crude

Generally applied to crude oil with an API gravity of 30 degrees or over. See American Petroleum Institute.

Light Ends

The least dense, more volatile parts of a crude oil stream in distillation.

LIH

Left in hole

LIM

Line insulator monitor

Line Fill

The volume of oil or gas which is needed to fill a pipeline before any deliveries can be made, representing a permanent inventory requirement.

Lithology

The study of rocks and hence the description of different formations encountered by a well.

Litre

1 litre = 1,000 cc (or cm³); 1 (UK) gallon = 4.546 litre

Live Oil

Crude oil containing volatile gases.

LKO

Lowest known oil (in a reservoir)

Lloyd's Register

Lloyd's Register of Shipping (Verification Authority)

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS

**LLSD**

Low level shut down

LNG

Liquefied natural gas, gaseous at normal temperatures and pressures but held in the liquid state by very low temperatures to facilitate storage and transportation in insulated vessels. (See Natural Gas/NGL's)

Local Drainage

The movement of reservoir fluids in the immediate vicinity of a flowing well.

Log

A systematic recording of data, such as a driller's log, mud log, electrical well log, or radioactivity log. Many different logs are run in wells to obtain various characteristics of downhole formations.

LOGIC

Leading Oil & Gas Industry Competitiveness <http://www.logic-oil.com>

LOL

Low oil level

LOLER

Lifting Operations and Lifting Equipment Regulations

Lost Circulation

Failure to recover to the surface all the drilling fluids at the same rate as they are pumped down a well, usually because of escapes into surrounding formations. Casing would normally be set through the relevant formation before proceeding.

LMRP

Lower marine riser package

LNG

See Natural Gas.

LP

Low pressure OR line pipe

LPG

Liquefied petroleum gas, essentially propane and butane held in the liquid state under pressure to facilitate storage and transportation.

LRFD

Load and Resistance Factor Design

LRP

Lower riser package

LRS

Lloyd's Register of Shipping

LSA

Life saving appliances

LTD

Log total length

LTS

Low temperature separator

LTSD

Low temperature shut down

LVDT

Linear variable displacement transformer

LVI

Low viscosity index

LW

Low water

LWD

Logging while drilling

LWRP

Lower workover riser package

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



M

mA, ml

milli Amp, milli litre (m indicates 1/1000)

Magnetic Particle Testing

A non-destructive testing method whereby the object is magnetised and minute particles applied externally. Cracks, etc. can be discerned at the surface. Welds in wellheads, etc. can safely be examined in situ.

Magnetic survey

An exploration method, in which an instrument that measures the intensity of the natural magnetic forces existing in the earth's subsurface, is passed over the surface or through the water. The instrument can detect deviations in magnetic forces, and such deviations may indicate the existence of an underground hydrocarbon reservoir.

Magnetometer

An instrument used to measure the intensity and direction of a magnetic field especially that of the earth.

MAIB

Marine Accident Investigation Board

Make a trip

To hoist the drill stem out of the wellbore to perform one of a number of operations such as changing bits, taking the core, and so forth, and then to return the drill stem to the wellbore.

Make Up/Break Out

To assemble/screw together the sections of joints of a string of pipe. "Breaking Out" is the opposite.

Manifold

An assembly of pipes, valves, and fittings by which fluid from one or more sources is selectively directed to various process systems.

MAPD

Major accident prevention document

MAR

Management and Administration Regulations (SI 1995/738).

Marine (drilling) riser. See riser pipe

Marginal

A well, development, etc. whose commercial profitability is in doubt.

Master Bushing

The collar which fits into the rotary table and through which the kelly passes.

Mat/Mattress

A structure placed on poorly consolidated, soft or unstable seabed as a footing for jackup rigs, etc.

MATE™

Alpha Thames' valved, in-line, multiported fluid connector which enables simultaneous connection/disconnection of numerous piping runs.

Maturity

The function of burial pressures, temperatures, and time which determines whether a source of hydrocarbons will provide oil or gas.

Max

Maximum

Mbbl/d

Million barrels of oil per day

MBbls

Thousand barrels

MBL

Minimum breaking load

MCA

Maritime and Coastguard Agency

MCC

Motor control centre

Mcf

Thousand cubic feet

MCM

Manifold control module

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS

**mcm/d**

Thousands of cubic metres per day

MCP

Main control panel

MCR

Management Consultants Register

MCS

Master control station

Md

Millidarcies (unit of permeability)

MD

Measured depth (well) OR Mean water depth

MDFT

Minimum dry film thickness

MDS

Material data sheet

Measurement While Drilling (M.W.D.)

Down hole instrument systems used to monitor and control continuously the direction of the well bore to the high degree of accuracy needed for e.g. horizontal drilling.

Median Line

The boundary between the offshore mineral extraction jurisdictions of two states, by convention drawn equidistant from the nearest point of land on each side.

MEG

Monoethylene glycol

MEOH

Methanol

Metamorphic rock

A rock derived from pre-existing rocks by mineralogical, chemical and structural alterations caused by processes within the earth's crust. Marble is a metamorphic rock.

MFDR

Manufacturer's fabrication data report

MFM

Multi-phase flow meter

MFO

Medium fuel oil

MHAU

Major Hazards Assessment Unit (HSE)

MHSWR

Management of Health and Safety at Work Regulations 1999

Microwave

HF multi-channel radio communications system designed to carry information between two points linked by line-of-sight transmission.

MIG

Metal insert gas welding

Migration

Hydrocarbons are often found in formations other than those in which their organic source was deposited. This movement often over considerable distances is known as migration. OR A process applied to data recorded, e.g. in a "3-D" seismic survey, to adjust for the effects of the "oblique" angle at which it was gathered.

Mil

Milli-litre(s)

Mill

A bit for cutting through steel obstructions in a well such as 'fish'.

Millidarcy

See Darcy.

MILS

Milli-inches OR thousandth of an inch

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS

**Mill Scale**

Oxides which form on the surface of a steel plate after heating during manufacture.

MIL-STD

Military Standard (USA)

Min

Minimum

MIND

Mineral-insulated non-draining (cable)

Miocene

Rocks formed in the fourth epoch of the Tertiary period, between the Oligocene and the Pliocene epochs. See Tertiary.

MIR

Moving in rig

Miscible Flooding

An injection/displacement process developed recently to obtain greater oil recovery in many reservoirs. Miscibility is the ability of two or more substances to mix, without the existence of an interface. The fluids are injected together into a reservoir in a secondary or tertiary recovery programme – e.g. Gas and LPG, or Carbon Dioxide followed by water.

MIU

Moisture, impurities and unsaponifiables (grease testing)

ML

Mud log, mudlogger

MLSS

Mudline suspension system (also MLS)

MLSV

Mudline safety valve

MLW

Mean low water (e.g. port data)

MM

Million

MMB

Module mounting base

Mmbbl/d

Million barrels of oil per day

mmboe

Million barrels of oil equivalent

MMBTU

Million British Thermal Units

MMcf

Million cubic feet

MMcf/d

Million cubic feet per day

MMO

Mixed Metal Oxide (surface coating)

MMS

Mineral Management Service (USA)

MMSCF

Million standard cubic feet

MMSCFD

Million standard cubic feet per day

MODU

Mobile offshore drilling unit.

Module

A self-contained, liftable package forming part of the facilities of an offshore installation e.g. accommodation module, compressor module, drilling module, etc. See also System-Module.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Molecular Sieve

A process of separating hydrocarbon fractions etc. by passing the feedstock through successive absorbent substances which offer differing degrees of resistance to its passage.

Monobuoy

See Single Buoy Mooring.

Monopod

A small offshore platform, resting on a single columnar 'leg', mainly for small satellite developments in shallow waters.

Moonpool

A hole or well in the hull of a ship (usually in the centre) through which equipment pass to gain access to subsea.

Motion Compensator

A heave compensator. Fitted to cranes etc. to counteract vertical motion caused by the sea.

MPa

Mega Pascal (1 MPa = 1 N/mm²), unit of pressure or stress (Mega = 10⁶)

MPE

Ministry of Petroleum & Energy (Norway)

MPI

Magnetic particle inspection

MQC

Multi quick connector

MSA

Marine Safety Agency, now the MCA (part of the DoT)

mScfd

Millions of standard cubic feet per day

MSL

Mean sea level

MSP

Maximum surface pressure

MSS

Manufacturers' Standardization Society of the Valve and Fittings Industry Inc. (USA)

MST

Multipurpose shuttle tanker

MSV

Multi-service vessel

MTBE

Methyl Tertiary Butyl Ether. A hydrocarbon product significant as one of the major lead-free Octane enhancers for gasolines. See Anti Knock Compounds. ETBE (Ethyl Tertiary Butyl Ether) has similar properties.

MTBF

Mean time between failures

MTD

Measured total depth

MTI

Materials Technology Institute of the Chemical Process Industries

MTM

Metal to metal

MTO

Material take-off

Mud

Mud is the name given to drilling fluid which is mainly a mixture of water, or oil distillate, and 'heavy' minerals such as Bentonite or Barites. Mud is pumped into a well at densities calculated to provide a hydrostatic pressure sufficient to overcome downhole formation pressures. (See e.g. Gas Kick). In addition, the mud is continuously circulated down to the bit, and returns in the annular space outside the drill-string, bringing with it rock cuttings for inspection and keeping the well clean. It is also engineered to maintain a thin protective layer of filter-cake on the bore hole wall, without excessive weight which would decrease the weight on the bit and hence penetration (see Drill String), and also possibly lead to differential sticking and formation damage. Mud is pumped from the mud pit (or tank) via the standpipe, rotary hose and gooseneck to the swivel, and into the drill stem. On return from down hole it is recovered and rock cuttings removed by the shale shakers before re-

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



circulation. To Mud Up is to increase mud weight and downhole pressure. To Mud Off is to seal off a formation with heavy filter cake. A Mud Log is the record of mud make-up and analysis of cuttings recovered. The composition of mud used in a well is normally supervised by a Mud Engineer.

Mudline

The seabed, or bed of any body of water where drilling is taking place.

Mud return line

A trough or pipe that is placed between the surface connections at the wellbore and the shale shaker and through which drilling mud flows upon its return to the surface from the hole. Also called flowline.

Multilateral

Multiple boreholes drilled from an existing single bore well.

Multiphase

A fluid mixture consisting of oil (with water) and dissolved gas. The practice of flowing stabilised well fluids (e.g. oil with high gas content) in a single pipeline by boosting the pressure to prevent vaporisation of the dissolved gases.

Multiphase Flow

Simultaneous flow of liquid and gas, or of different liquids, through a pipeline or other vessel (e.g. oil/gas, gas/water, oil/water).

Multiple Completion

A well perforated and completed to produce simultaneously but independently from more than one formation. Also known as Multipay Well.

Multiplex

Relating to or being a system of simultaneous control of two or more functions e.g. electro/hydraulic controls.

MUST

Modular Underwater Separation Technology; predecessor of AlphaPRIME™ and AlphaCPU™

MVHJ

Manifold valve hydraulic jumper

MW

Megawatts (=10⁶ watts)

MWA

Mineral Workings (Offshore Installations) Act 1971.

MWD

Measurement while drilling OR Mean water depth

MWP

Maximum working pressure

N

N

Newton (unit of force)

NA or N/A

Not applicable

NACE

National Association of Corrosion Engineers (USA)

NAMAS

National Material Accreditation Service

Naphtha

A collective name given to a range of distillate fractions covering heavy gasolines and some of the lighter kerosene distillates.

NAS

National Aeronautical Society

Native Gas

Gas originally discovered in a reservoir as distinct from injected gas. See also Associated Gas.

Natural Depletion

Producing a reservoir by means of its natural pressure – without pressure maintenance. (Also Flush Phase, Primary Production, etc.)

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Natural Gas/NGL's

Natural Gas is primarily Methane and also some Ethane with small quantities of entrained heavier fractions, such as Propane, Butane, etc. These, and others, are readily condensed from the Natural Gas flow and are known as Natural Gas Liquids, or NGL's, as distinct from Liquid Natural Gas (L.N.G.) which is Methane/Ethane refrigerated to the liquid state. NGL may be produced from condensate reservoirs.

Natural Period

The time that elapses between successive occurrences of any phenomenon, such as two successive wave-crests or the resulting movements of heave, roll, etc. of a floating vessel.

Nautical mile

= 1.852 km

NB

Note well (nota bene (Latin)) OR Nominal Bore

NCR

Non-conformance report (quality)

NCS

Norwegian Continental Shelf

NDE

Non-destructive examination

NDFT

Nominal dry film thickness

NDT

Non-destructive testing

NEL

National Engineering Laboratory (East Kilbride, Scotland)

Neoprene

A mixture of natural and petroleum-based synthetic rubber highly resistant to chemical attack.

NGL

Natural gas liquid(s); a mixture of hydrocarbon liquids which include butane and ethane obtained from natural gas. It may be produced from condensate reservoirs but more probably produced as a by-product of oil production.

NGO

Non-government organisation

Nipple etc.

A short length of pipe with connections at both ends. To Nipple Up is to assemble pipe valves etc. especially a blowout preventer. A Nipple Chaser is a materials man whose job is to obtain and have ready for shipment to the rig the various tools, supplies, etc. needed.

NIU

Network interface units

NMD

Norwegian Maritime Directorate

NMVOC

Non methane VOC (Volatile Organic Compound)

Nm

Newton metre(s), unit of torque

N/mm²

Newton(s) per square millimetre; unit of pressure or stress

NNM

Not normally manned

NNMI

Not normally manned installation

NOAA

National Oceanic and Atmospheric Administration (USA)

Nodding Donkey

The colloquial name for conventional onshore wellhead production beam pumps.

Node

The specially strengthened junction of tubular components in a conventional steel platform jacket. These are several on each leg and also at the meeting of cross-members.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



NOF

Non-Operators Forum OR Northern Offshore Federation

NOIA

National Ocean Industries Association (USA)

Non Destructive Testing (NDT)

Methods of inspecting and testing the quality or integrity of vessels or equipment which do not involve removal or testing to destruction of representative sections.

NORSOK

Norwegian Standards for the Offshore Petroleum Industry

NOSA

National Offshore Safety Agency (Australia)

Nox

Nitrogen oxides

Nozzle

A flanged inlet or outlet connection on a pressure vessel.

NPD

Norwegian Petroleum Directorate

NPF

Norwegian Petroleum Society

NPI

Net profit interest

NPS

Nominal pipe size

NPSH

Net pump suction head

NPV

Net present value; an assessment of the long-term profitability of a project made by adding together all the revenue it can be expected to achieve over its full life and deducting all the costs involved, discounting both future costs and revenue at an appropriate rate. The net present value of a field is maximised by achieving early oil and low initial CAPEX OR No visible porosity

NRV

Non-return valve

NS

No show

NTS

Norwegian Technology Centre OR Not to scale

NUI

Norsk Undervannsintervensjon OR Normally unattended installation

NWECS

North West European Continental Shelf

O

Ø

diameter (Also used by electrical engineers to denote phase e.g. 440 V, 3-phase supply.)

Obligation Well

A well undertaken as part of the process of earning a concession.

OBM

Oil-based mud

OBSROV

Observation remotely operated vehicle

OCB

Offshore Certification Bureau OR oil circuit breaker

OCIMF

Oil Companies International Marine Forum

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS

**OCS**

Outer Continental Shelf

OD

Outside diameter

Odorant

A substance with a penetrating smell or 'stench' which is added to a gas supply to assist detection of leaks, etc. Although toxic and highly flammable, Methane is colourless, odourless and hard to detect.

OE

Oil equivalent

OEC

Other end connector

OECD

Organisation for Economic Co-operation and Development

Offset Well

A well drilled to 'mirror' a production well drilled near the boundary of a neighbouring concession, on a common reservoir, in order to secure a due share of production.

Offsite Facilities (Offsites)

Ancillary or service plant which is distant from the main process plant. (e.g. Water treatment, power generation, laboratory etc.) It is sometimes applied to service installations in general, particularly at refineries.

Offshore Installation Manager (O.I.M.)

The person on an offshore platform with statutory responsibilities for safety, etc., similar to those of a ship's captain.

OFLU

Oil fluorescence

O&G

Oil and gas

OGITF

Oil & Gas Industry Task Force

OGP

International Association of Oil & Gas Producers

OHTC

Overall heat transfer coefficient. Represents the loss of calorific energy per system length unit (e.g. steel pipe plus thermal insulation). W/m^2K

OIAC

Offshore Industry Advisory Committee (UK)

OIH

Oil in hole

Oil and gas separator

An item of production equipment used to separate liquid components of the wellstream from gaseous elements.

OILC

Offshore Industry Liaison Committee (a UK union)

Oil-Based Mud

Drilling mud in which the solids are suspended in a hydrocarbon distillate rather than water. This has operational advantages particularly in deeper or technically difficult wells, but can make the detection of formation hydrocarbons more difficult.

Oil Column/Gas Column

The vertical distance between points of highest and lowest known oil or gas in a reservoir.

Oiler

An oil well, particularly an oil discovery well.

Oil Field

A group of hydrocarbon reservoirs in a common geological setting OR A single reservoir, the subject of actual or planned development.

Oil Geology

Specialised geology which deals exclusively with sedimentary basins and the sources of hydrocarbons.

Oil operator

See operator

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS

**Oilpatch**

A colloquial reference to exploration and production activity.

Oil String

The inner or production string of casing in a well.

Oil/Water Contact

The lower end of the column in a reservoir with underlying water. This may be graduated or occur in formations where it is hard to detect.

OIM

Offshore Installation Manager

OIP

Oil in place

OLF

Oil Industry Association (Norway)

Olefins

The group of hydrocarbons known as Alkenes. See Section 10.

Oligocene

Rock formed in the third epoch of the Tertiary period. See Tertiary.

Open Flow

Producing a well without chokes or beans. Unrestricted production normally for testing or maintenance purposes.

Open Hole

An uncased section of well borehole.

Operator

The company or other organisation responsible for conducting operations on a concession, on behalf of itself and any other concession holders, (non operators). The operator usually has the largest share of equity participation OR An oil industry worker, someone controlling process plant etc OR the mechanism activating a valve, etc.

OPET

Organisations for the Promotion of Energy Technology

OPEX

Operating expenditure

OPOL

(Offshore Pollution Liability Agreement). An industry co-operative insurance and self-insurance scheme between operators in the European continental shelf and adjacent coastal areas covering costs of major pollution clean up.

OPS

Office of Pipeline Safety (USA)

Organic/Organic Chemicals

Substances derived from living organisms, such as oil in the natural state.

Orifice Meter

An instrument which measures the flow of a fluid in a pipeline by monitoring a controlled flow through a small aperture.

Orogeny

The process of shrinking, cooling and 'wrinkling' of the earth's crust, leading to the formation of mountains, synclines, anticlines etc.

ORRI

Overriding royalty interest

O/S

Out of service

OSD

Offshore Safety Division (of the HSE).

OSCAR

Optical scanning apparatus for ropes

OSPAR

Convention for the Protection of the Marine Environment in the North East Atlantic.

OTC

Offshore Technology Conference

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



OTS&F

Odour taste, stain and fluorescence

Outcrop

The appearance of occurrence of a rock formation at the surface.

Overlift

Collecting more crude oil etc. than a production participant or purchaser is entitled to at any one time. See also Underlift.

Overshot

A fishing tool with a socket to fit over, enclose, and grip the top end of the fish for pulling out.

OWC

Oil-water contact

OWS

Operator workstation OR oily water separator

P

PA

Public address OR personal assistant

P&A

Plug and abandon

Packer

A piece of downhole equipment, consisting of a sealing device, a holding or setting device, and an inside passage for fluids, used to block the flow of fluids through the annular space between the tubing and the wall of wellbore by sealing off the space between them. It is usually made up in the tubing string some distance above the producing zone. A packing element expands to prevent fluid flow except through the inside bore of the packer and into the tubing. Packers are classified according to configuration, use, and method of setting and whether or not they are retrievable (that is, whether they can be removed when necessary, or whether they must be milled and drilled out and thus destroyed).

PAH

Polycyclic aromatic hydrocarbons

Paraffins

The alkane hydrocarbons

Participation

This usually refers to rights retained by a state when granting a concession, primarily to acquire part of the production at stated terms, but sometimes also to participate on a full equity basis in any production development.

Pay String

The production or inner string of casing.

Pay Zone/Horizon

A formation containing producible hydrocarbons.

PBD

Plugged back depth

P & I D

Piping and instrumentation diagram

Pedestal

A large-diameter, vertical tube onto which a crane is attached.

Perforation

Holes punched in the casing of a well at the pay zone to be produced, to allow oil or gas to enter the well.

Perforating Gun

A perforating gun is a cylindrical tool loaded with explosive charges which are triggered opposite the pay zone, perforating the casing in many places.

Permeability

The degree to which a body of rock will permit a fluid to flow through it. It is a function of the shape of the capillary pore spaces and the degree to which pores are connected.

Petroleum

Literally 'rock oil'. Can include products, but normally means crude oil.

Petrochemicals

Petrochemicals are chemical feedstocks and intermediates derived from petroleum.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Petroleum Engineer

A specialist in the properties and behaviour of hydrocarbons in their natural reservoirs and under production conditions. While a geologist normally provides estimates of hydrocarbons-in-place, a petroleum engineer would normally provide the estimate as to how much of it could be produced (recoverable reserves) under what conditions, and at what rate.

Petroleum Province

A large area where reservoirs show common origins and characteristics.

Petrology

The study of rocks, their origin, chemical and physical properties and distribution.

PC

Personal computer

PCB

Polychlorobiphenyls OR printed circuit board

PCC

Production choke - close

PCF

Pounds per cubic foot

PCN

Personnel certification in non-destructive testing

PCO

Production choke – open OR parent company overheads

PCS

Platform control station OR pressure control system

PCT

Patent Co-operation Treaty

PCV

Production choke valve OR pressure control valve

PCVC

Production choke valve – close

PCVO

Production choke valve - open

PD

Pressure directive OR pig detector

PDI

Pressure differential indicator OR Pig detector indicator.

PDO

Plan for development and operation

PDQ

Production, drilling and quarters platform

PDT

Pressure Differential Transducer

PE

Polyethylene

PEA

Production Engineering Association

PED

Petroleum Engineering Division (of the Department of Energy) OR Pressure Equipment Directive (EC)

Perforate

To pierce the casing wall and cement to provide holes through which formation fluids may enter or to provide holes in the casing so that materials may be introduced into the annulus between the casing and the wall of the borehole. Perforating is accomplished by lowering a perforating gun, or perforator, into the well; the perforator fires electrically detonated bullets or shaped charges.

Permeability (perm.)

A measure of ease with which a fluid flows through the connecting pore spaces of a rock or cement. The unit of measurement is the millidarcy OR the fluid conductivity of porous medium OR the ability of a fluid to flow within the interconnected pore network of porous medium.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS

**PFD**

Process flow diagram

PFEER

Prevention of Fire and Explosion, and Emergency Response Regulations (SI 1995/743).

PG

Plate girder

PGB

Permanent guide base

PH

A scale of alkalinity or acidity running from 0 to 14, with 7 representing neutrality, 0 maximum acidity and 14 maximum alkalinity.

Phase

One of two or more fluids as in a production fluid (i.e. oil, gas, water) See also Ø above for electrical engineering context of phase. See also multiphase.

Photogrammetric

The use of still photography to capture dimensional information for transposing to drawings.

PI

Productivity index

PIC

Pressure indicator/controller

PICS

Pull-in and connection system

PICT

Pull-in and connection tool

Pig

Bullet-shaped, cylindrical or spherical capsules which are inserted into a pipeline flow and travel along it with the fluid. Their primary purpose is to scrape the pipeline clean or rush, wax, or other deposits, or in a gas pipeline, slugs or liquid from low points in the line. Caliper Pigs also measure the pipeline as they travel, and 'smart' or 'intelligent' pigs contain various instruments to monitor pipeline condition and integrity. Pig Launchers and Pig Traps are the arrangements of valves etc. through which pigs are inserted into and extracted from a line.

Piles

Tubular steel shafts driven into e.g. the sea bed to anchor a structure. Sometimes known as pins, piles are usually driven through the centre of tubular platform legs or through external sleeves or 'skirts' attached to the legs OR there are numerous uses of piles in ports and in foundations for all heavy plant, onshore and offshore.

Pillow Tanks

Collapsible synthetic rubber/fabric storage tanks which can be easily transported and deployed in, e.g. military operations or difficult terrain.

Pinch Out

The thinning out and disappearance over a distance of a formation e.g. an oil bearing sandstone between layers of impermeable rock.

Pinger

A source of sound (e.g. an 'air gun') for an underwater seismic survey.

PIP

Pipe-in-pipe

Pipe clamp

In drilling, a collar fitted to a string of pipe to stop it dropping if the slips fail to hold it.

Pipe Facing Machine

A machine for cleaning and preparing the butt ends of pipe joints for welding.

Pipeline

A system of connected lengths of pipe, usually buried or laid on the seabed, that is used for transporting production fluid (oil or gas).

Pipe rack

Where stands of drill pipe are stacked vertically in a derrick ready for use. Racks or frames are also sometimes used to store tubulars horizontally in yards and on offshore decks, and when transporting them offshore.

Pipe ramp

A sloping ramp from the pipe storage area up to the working floor of a drilling rig.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Pipe rams

Hydraulic rams in a blowout preventer which are shaped to fit around the drill-stem and seal the annulus. Blind Rams are designed in extreme emergency to shear through the drill pipe and seal the well completely.

Pipe spool

A single length of pipe with flanged ends

Piping

Pre-fabricated production or process system piping of 2-inch bore or larger. (See also tubing.)

PIT

Pull-in tool

PITP

Production inspection plan

PIV

Production isolation valve

Pkr

Packer

Plat

An official concession map in the U.S.A. – hence any official concession map.

Plate tectonics

The study of the formation and movement of the “plates” of which the earth’s crust is formed.

Platform

An immobile offshore structure from which development wells are drilled and produced. Platform rigs may be built of steel or concrete and may be either rigid or compliant. Rigid platform rigs, which rest on the seabed, are the caisson-type platform, the concrete gravity platform, and the steel jacket platform. Compliant platform rigs, which are used in deeper waters and yield to water and wind movements, are the guyed-tower platform and the tension-leg platform.

PLC

Programmable logic card OR Programmable logic controller

Plenum

An enclosure such as a control room where for safety reasons the air pressure is kept higher than outside, to prevent infiltration by inflammable or poisonous gases.

PLEM

Pipeline end manifold

PLET

Pipeline end termination (usually a skid or sled)

PLMV

Production lower master valve

PLS

Plastic limit state

Plug/Plug and Abandon

To seal a well, or part of a well with cement, e.g. before producing from a higher formation, sidetracking, or leaving the well permanently sealed and abandoned.

PM

Preventative maintenance OR Project manager

PMA

Particular material appraisal

PMV

Production master valve

PO

Purchase order

POB

Persons on board

POH

Pulled out of hole (also POOH)

Polycyclic Hydrocarbons

Hydrocarbons whose carbon atoms form a ring or rings e.g. Cyclohexane.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Polymer

Two or more molecules of the same kind, combined to form a compound with different physical properties – e.g. Polyethylene.

Pontoon

A flatbottomed vessel ("barge") for transporting structures etc. to an offshore installation site. OR A submerged or semi submerged part of a floating drilling rig structure designed to assist flotation, containing ballast tanks.

Pool

An Oil Pool is a reservoir or group of reservoirs sharing a common pressure system. OR In a refinery or blending plant, the Gasoline Pool is the average Octane value of the gasolines produced/available.

Pop Up Buoy/Recall Buoy

A buoy which is normally submerged but will surface in response to an acoustic signal. Often used to mark the position of wellheads. (Also, colloquially, "Yoo hoo" buoy).

Porosity

The volume of free space between the grains of a rock capable of holding fluid, (gas or liquid). It is expressed as a percentage of total gross rock volume.

Pour Point Depressant (PPD)

Chemical compounds added to a very viscous or waxy oil to prevent it thickening at low temperatures to the point where it will not flow.

P&P

Porosity and permeability OR porous and permeable

PPA

Petroleum Productions Act

PPD

Pour point depressant

PPE

Personal protective equipment

PPM

Planned preventative maintenance OR Project programme manager

ppm

Parts per million

PPS

Polyphenylene sulphide

PQG

Permanent quartz gauge

PR

Performance Requirement level in accordance with API Specification 6A

PRC

Pressure recorder/controller

PRE

Pitting resistance equivalent OR Project reliability engineer

Pressure Bomb

A down hole pressure recording capsule used in well-monitoring.

Pressure Habitat

A sealed chamber in which divers can rest between shifts without decompression.

Pressure Maintenance

The process of keeping reservoir pressure at the optimum level during production, normally by water or gas injection to replace fluids extracted.

Pressure Vessel

A tank or process chamber built to hold fluids under pressure whether for production, refining, or other purposes. Can also be designed to withstand external pressure.

Prime mover

An internal-combustion engine or a turbine that is the source of power for driving a machine or machines.

PROAct™

Alpha Thames' subsea, electric, linear actuator, offering precise and fast operation of choke valves and modulation pressure or flow control valves. It is unique in that it is the first available subsea electric actuator that combines the benefits of electric actuation with the performance required for modulating control valve duties.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



PROD

Production

Produced water

Formation water removed from the oil and gas in the process separators

Production

The full scale extraction of hydrocarbon reserves. Also the reserves extracted. OR Refinery/petrochemical operations resulting in a yield of products.

Production Casing String

The innermost steel lining of a well cemented in place and perforated for production in the pay zone. Note that production tubing is inserted inside this casing. (See production tubing string)

Production Payment Loan

A loan repayable out of production from a well or field.

Production Plateau

The period during which a field is capable of producing at or near its maximum average rate.

Production Platform/Facility

Production platforms are of varying types depending on environment (water depth etc. and reservoir needs). Semi-submersible and ship-shaped vessels developed from the respective off-shore drilling rig concepts are also used as Production facilities. Where several inter-dependent platforms are clustered in a development they are known as a Production Complex.

Production Separator

Main process vessel used primarily for the separation of gas, oil (and condensate) and water

Production Sharing Contract (PSC)

A type of concession in which part of the return to the host government is delivered as produced hydrocarbons, on a scale normally calculated after deduction of production and other agreed costs. It works particularly well in areas with less developed taxation regimes, and relatively little local petroleum industry activity.

Production Testing

A production test concerns the capability to produce (productivity) of a well and its effects on the reservoir produced. A production test may continue for several months where extensive data is necessary prior to final commitment to development expenditures etc.

Production Tubing String

The string of pipe installed inside the casing of a production well, to a point just above the reservoir through which the fluids are produced. It may be 2" to 5" diameter or more, depending on the production flow and pressures anticipated. Unlike the casing, the tubing is designed to be replaced during the life of a well, if required

Production Well/Producer

A development well specifically for the extraction of reservoir fluids.

Production Wellhead and Tree

The assembly of casing head, tubing head, connections and well-control valves fitted to a producing well. The "Christmas Tree" is the name given to the complete assembly of valves, connecting flanges etc.

Productive Horizon

A pay zone. See also Horizon.

Productivity/Productivity Index

The continuous productive capacity of a well. The Index is measured as volume produced (e.g. barrels per day) divided by the drop in pressure (p.s.i.) to achieve that flow rate starting with a "shut in" pressure.

Profiling

Shallow seismic surveying by echosounder techniques.

Proppants

Sand, gravel or other particles or "beads" used in hydraulic fracturing of a formation, to allow oil to flow more freely by wedging into the cracks etc. created and preventing them reclosing.

Proprietary Data

Primarily data obtained from the owner of a seismic survey record under confidentiality undertaking. It can also include all confidential information acquired as part of sole or joint operations.

Prorationing

Restriction of production in a multi-concession system in proportion to field capacities and ownership interests. This may be by government regulation or due to a period of under-capacity or e.g. maintenance in a pipeline system.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



PS	Performance standard OR pressure switch
PSA	Production sharing agreement OR pressure set at
PSC	Production sharing contract
PSD	Process shut down
PSDP	Process shut down panel
psi	pounds per square inch (also lbf/in ²)
psia	pounds per square inch, absolute pressure
psig	pounds per square inch, gauge pressure
PSL	Product Specification Level in accordance with API Specification 6A
PSPA	Petroleum and Submarine Pipe-lines Act
PSU	Power supply unit
PSR	Pipeline Safety Regulations (SI 1996/825).
PSRC	Project safety review committee
PSSR	Pressure Systems Safety Regulations (2000)
PSV	Production swab valve OR pressure safety valve
PT	Pressure transducer
PTIV	Production/test isolation valve
PTT	Pressure and temperature transducer
PTW	Permit to work
Pull-In	Winching the end of a subsea pipeline or flowline into a connecting chamber or wellhead, or through a "J" tube riser guide to the platform deck.
Pulling Casing	Retrieving casing from a well (where possible) before abandonment.
Pulling Out	Retrieving and stacking the drill-string on reaching target depth.
PUMV	Production upper master valve
Pup Joint	A joint of pipe of non-standard length, to make up a string of tubulars to an exact required total length.
PUQ	Production/utilities/quarters (platform, etc.)
Purge	To maintain gas flow in an over-rich or lean concentration in order to avoid the build-up of oxygen and an explosive mixture
Purging	Cleaning the interior of pipes and vessels to eliminate inflammable matter, usually with a "safe" gas such as nitrogen.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



PUWER

Provision and Use of Work Equipment Regulations (SI 1992/2932).

PV

Pore volume OR pressure, velocity (factor)

PVC

Polyvinylchloride

PVT

Pressure volume transducer OR pressure, volume and temperature data or study usually related to a test of a reservoir formation or well

PWHT

Post-weld heat treatment

PWMD

Pulse width modulated drive(s) (as in VSD's)

PWV

Production wing valve

Q

QA

Quality assurance. A sequence of planned and systematic actions necessary to provide adequate confidence that a product or service will satisfy given quality requirements.

QC

Quality control. The operational techniques and activities that are used to ensure that a quality product or service will be produced.

QCP

Quality control procedure

QM

Quality management

QMS

Quality management system

Q&Q

Quantity and quality

Quadrillion

In the oil and gas industry, the U.S. definition is used, e.g. 10^{15} not 10^{24} as internationally accepted.

Qualitative risk assessment

Risk assessment based on actual operational experience, engineering standards, and sound engineering judgement.

Quiet Rig

A drilling rig insulated and equipped to operate with minimum disturbance of sensitive onshore environments such as built-up areas.

Q Unit

An unit used in overall assessment of energy resources. It is equal to 10^{18} British Thermal Units (BTU).

QRA

Quantitative risk assessment – involves calculations to assist with the identification of risks and to determine the frequency, magnitude and consequence of hazardous events.

QRS

Quantitative risk study

QT

Qualification test

Qty

Quantity

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



R

Rabbit

A small pig for flowlines

RAL

Colour definitions issued by RAL, Deutsches Institut für Gütesicherung und Kennzeichnung e.V.

RALOG

Radioactive log

RAM

Random access memory OR Reliability, Availability and Maintainability (Study)

RAMEX

Cost of reliability

Rathole

A hole in the drilling floor in which the kelly joint is kept when not in use

Raw Gas

Natural gas before removal of water, sand and other impurities

RBGL

Riser base gas lift system

RBI

Risk-based inspection

RBP

Retrievable bridge plug

RCM

Riser control module OR Reliability-centred maintenance

RCMS

Reliability Case Management System

RCP

Reliability Case Plan

RCR

Reliability case report

REAct™

Alpha Thames' subsea, electric, fail-safe, linear actuator for the operation of isolation valves. (REAct™ Mk II is being developed and tested under licence by BEL Valves.)

Reamer

A bit designed to enlarge a borehole. It may be included in the drill string just above a conventional bit.

Recip

Reciprocating, reciprocate

Recovery Factor

The ratio between the volumes of oil and/or gas produced and produceable from a reservoir and the oil and/or gas originally in place.

Recycling (Gas)

Reinjection of produced gas into a gas/condensate reservoir to maintain pressure for optimum recovery of condensates.

Reef

A reservoir, usually limestone, deposited in marine conditions. As the name implies, it is frequently elongated, and early high production may not be sustained without pressure support.

Reel vessel

A ship or barge specially designed to handle pipeline that is wound onto a large reel. To lay the pipeline, the vessel pays out the pipe off the reel at a steady rate onto the seabed. The pipeline is first constructed at an offshore facility where it is welded, coated, inspected, and wound onto the reel.

Re-Entry

Inserting the drilling, testing or logging string etc. into the wellhead.

Reeve

To pass (as a rope) through a hole or opening in a block or similar device.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



REGEX

Cost of lost production

Reid Vapour Pressure (RVP)

A standard oil industry measure of vapour pressure, in p.s.i. at 100°F (38°C).

Relief Well

A second well deviated from a safe distance to a bottom-hole location close to a "blowout" well and produced so as to reduce the pressure in the blowout. See also Killer Well.

Req.

Requisition

Reserves/Recoverable Reserves

Oil or gas that it is anticipated can be produced. Technical Reserves are theoretically producible at a gross operating margin by e.g. normal primary or secondary recovery methods, while Commercial Reserves are restricted to volumes recoverable at an acceptable profitability. The detailed definitions are important in oil and gas financial and other information, and are quoted more fully in Section 6 in the form currently approved by the Society of Petroleum Engineers.

Reservoir

A subsurface porous permeable rock body in which oil and/or gas is stored. Most reservoir rocks are limestones, dolomites, sandstones, or a combination of these. The three basic types of hydrocarbon reservoirs are oil, gas and condensate. In a typical oil reservoir, these fluids occur in different phases because of variants in their gravities. Gas, the lightest, occupies the upper part of the reservoir rocks; water, the lower part; and oil, the intermediate section. In addition to its occurrence as a cap or in solution, gas may accumulate independently of the oil; if so, the reservoir is called gas reservoir. Associated with the gas, in most instances, are salt water and some oil. In a condensate reservoir, the hydrocarbons may exist as a gas, but, when brought to the surface, some of the heavier ones condense into a liquid.

Reservoir drive mechanism

The process in which reservoir fluids are caused flow out of the reservoir rock and into a wellbore by natural energy. Gas drives depend on the fact that, as the reservoir is produced, pressure is reduced, allowing the gas to expand and provide the driving energy. Water-drive reservoirs depend on water pressure to force the hydrocarbons out of the reservoir and into the wellbore.

Reservoir Pressure

The pressure at reservoir depth in a shut-in well.

Residual Oil

The dense, viscous "Heavy Ends" of the barrel, remaining after extraction of higher-value fractions.

Retrograde Condensation

In some reservoirs, mainly deep gas/condensate reservoirs, (gas/oil ratio between 5,000 and 100m,000 cu.ft. per barrel) where temperatures and pressures are high, a progressive decrease in reservoir pressure as result of production will gradually lead to separation of liquids (heavier molecules) from natural gases in the reservoirs. These liquids are mainly lost to production, being "by passed" by the more mobile gas. "Recycling", reinjection of produced gas to maintain pressure, is used to postpone this problem until an acceptable proportion of recoverable liquids has been produced.

Reworking a Well

Maintenance work on a well to stimulate production. This may involve cleaning out silt deposits etc., or stimulation techniques such as fracturing or acidizing.

RFQ

Request for quotation

RGIT

Robert Gordon Institute of Technology

Rig

A collective term to describe the permanent equipment needed for drilling a well. It has come to include the onshore and offshore vehicles, mobile platforms, or vessels on which the equipment is installed.

Rina

Italian classification (verification) society

Riser clamps

Clamp(s) used to secure the riser to the jacket

Riser pipe

The pipe (from the blowout preventer) and special fittings used on floating offshore drilling rigs to establish a seal between the top of the wellbore, which is on the seabed, and the drilling equipment, located above the surface of the water. A riser pipe serves as a guide for the drill stem from the drilling vessel to the wellhead and as a conductor of drilling fluid from the well to the vessel. The riser consists of several sections of pipe and

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



includes special devices to compensate for any movement of the drilling rig caused by waves. It is also called a marine riser. The vertical portion of a subsea pipeline (including the bottom bend) arriving on or departing from a platform.

RISKEX

Cost of risk

RIV

Rapid intervention vessel

RMS

Root mean square OR Reliability management system

RNLI

Royal National Lifeboat Institution (UK)

ROAct™ Actuator

Alpha Thames' subsea, electric, rotary actuator for the operation of rotary isolation valves.

Rock dumping

Deposition of rocks onto subsea pipelines, to provide protection against anchors and trawlnets, when burying the pipe is impracticable. Rocks and gravel may also be dumped around subsea wellheads and jacket legs to repair scour damage.

ROI

Return on investment

ROL

Rig on location

Roller Bit

A rotary drilling bit which penetrates by pulverising the rock with its toothed wheels.

RON

Research octane number

ROP

Remotely operated pickup OR rate of penetration

ROT

Remotely operated tool; an ROV with tool attached

Rotary Hose

The mud supply hose from the standpipe to the swivel.

Rotary table

The principal component of a rotating, or rotary machine, used to turn the drill stem and support the drilling assembly. It has a bevelled gear arrangement to create the rotational motion, and an opening into which bushings as are fitted to drive and support the drilling assembly.

Round Trip

Recovering the drill string from the bottom of the well to the surface and returning it to continue drilling. This may be e.g. to replace the bit. "Tripping" is arduous and interrupts "making hole".

ROV

Remotely operated vehicle

ROVSV

ROV support vessel

RSD

Returnable steel drum

RT

Radiographic testing

RTI

Reliability Threat Identification

RTJ

Ring-type joint

RTO

Real time operations

Running-In/Running Casing

Inserting any tubular or tool into a well is known as "running-in". Assembling and lowering in a string of casing is "running casing".

RVP

Residual vapour pressure OR Reid vapour pressure

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



S

Sack

Cement, mud, chemicals and other solids used in drilling are supplied to the rig and measured into the well in sacks (SAX).

Sacrificial anode

In a cathodic protection system, the sacrificial anodes form the positive electrodes. A sacrificial anode is a block or bar of non-ferrous metal selected to be of a more noble material than that of the structure being protected. It is attached to the submerged part of a steel structure (or a ship's hull). The sacrificial anode is gradually eroded in preference to the structure, thereby preventing structural corrosion.

SADIE

Safety Alert Database and Information Exchange (funded by UKOOA and the HSE).

SALM

Single anchor leg mooring; a compliant monopod version of the SBM tanker-loading buoy, used in deeper water.

Salt dome

A dome that is caused by an intrusion of rock salt into overlying sediments. A piercement salt dome is one that has been pushed up so that it penetrates the underlying sediments, leaving them truncated. The formations above the salt plug are usually arched so that they dip in all directions away from the centre of the dome, thus frequently forming traps for petroleum accumulations.

SAM

Subsea accumulator module

Sap No

Saponification number

SAR

Search and rescue

SASS

Survey autonomous semi-submersible

SAT

Saturated

Satellite navigation/comms.

Communication satellites are extensively used to fix or locate positions offshore to the accuracy necessary for oil and gas operations.

Satellite well

Usually a single well drilled offshore by a mobile offshore drilling unit to produce hydrocarbons from the outer fringes of a reservoir.

Saturated hydrocarbons

Hydrocarbon molecules which cannot absorb any more hydrogen atoms without subdividing to release carbon valencies for further hydrogen.

Saturation diving

Diving performed over long periods at high submerged pressures. Instead of depressurising after each shift, the diver lives in a (hyperbaric) pressure chamber onboard the DSV. See also decompression chamber.

SAW

Submerged arc welding

SAX

Sacks (e.g. cement)

Saybolt seconds

Unit of viscosity, mainly used in commercial specifications.

sbgi

Society of British Gas Industries, the trade association of the British onshore gas industry.

SBHP

Static bottom hole pressure

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



SBM

Single buoy mooring; A single-point buoy mooring for loading and unloading tankers. The oil is fed to or from the centre of the SBM from below, and the mooring gear and loading hoses can swivel above the buoy through a full revolution. The tanker moors bows-on and weather vanes around the buoy, presenting the minimum frontal area to the combined forces of wind and waves.

SBSV

Standby/safety support vessel

SBV

Standby vessel

SCADA

Supervisory control and data acquisition OR subsea controls and data acquisition.

SCC

Sulphide stress cracking OR Surface compression chamber

SCE

Safety-critical element

SCF

Stress concentration factor OR Single column floater (also known as spar)

Scf

Standard cubic feet

Scf/bbl

Standard cubic feet per barrel

Scf/d

Standard cubic feet per day

Scf/Stb

Standard cubic feet per stock tank barrel

SCM

Subsea control module

SCMMB

Subsea control module mounting base

Scouring

The process by which tides and currents carry away loose sedimentation from around a fixed object on the seabed such as a platform leg or pipeline.

SCR

Safety Case Regulations (SI 1992/2885) OR Steel catenary riser OR selective catalytic reduction.

SCRAMS

Surface controlled reservoir analysis and management system.

Scraper

A device for cleaning the inside of casing in a well.

Scraper pig

A device for cleaning the inside of a pipeline.

Scratchers

Collars with wire bristles fitted to the outside of casing to remove filter cake from the well bore to help to ensure a good cement bond.

Screen

A tubular sieve inserted in a well bore to hold back loose sand and rock without letting oil and gas enter the well.

Scrubber

A separator for removing liquids and solids from a gas stream.

SCS

Subsea control system

SCSC

Subsea control system computer

SCSSV

Surface-controlled subsurface safety valve

SCU

Surface control unit

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS

**SD**

Sand detector OR shut down OR stream day

SDB

Subsea distribution box

SDC

Single disciplinary check

SDU

Subsea distribution unit

SDV

Subsea distribution valve OR Shutdown valve

Seal

An impermeable fault or stratum of rock beneath or behind which hydrocarbons can accumulate. See also reservoir.

Second end connection

Applies to umbilicals and flexible pipeline; having raised the first end through a j-tube to the platform, the umbilical or pipe is laid away from it toward the other (second) end, which is then terminated, connected, or left on the seabed to be picked up at a later stage.

Secondary porosity

Porosity developed after the original deposition of a formation, e.g. by the action of water on soluble components of the rock, or well stimulation techniques.

Secondary recovery

Production of fluids from a reservoir by water or gas injection and pressure maintenance rather than by blow down or natural primary recovery.

Sedimentary rock

A rock composed of materials that were transported to their present position by wind or water. Sandstone, shale and limestone are sedimentary rocks.

Seismic survey

An exploration method in which strong, low-frequency sound waves are generated on the surface or in the water to find subsurface rock structures that may contain hydrocarbons. The sound waves travel through the layers of the earth's crust. At formation boundaries, some of the waves are reflected back to the surface where sensitive detectors pick them up. Reflections from shallow formations arrive at the surface sooner than reflections from deep formations, and since the reflections are recorded, a record of the depth and configuration of the various formations can be generated. Interpretation of the record can reveal possible hydrocarbon-bearing formations.

Self-elevating drilling unit

An offshore drilling rig, usually with a large hull. It has a mat or legs that are lowered to the seabed and a main deck that is raised above the surface of the water to a distance where it will not be affected by the waves. Also called a jackup drilling rig.

SEM

Subsea electronics module

Semi submersible

A floating offshore production and or drilling unit that has pontoons and columns that, when flooded, cause the unit to submerge in the water to a predetermined depth. Living quarters, storage space, etc. are assembled on the deck. Semisubmersible rigs are either self-propelled or towed to a site and either anchored or dynamically positioned over the site, or both. In shallow water, some semi submersibles can be ballasted to rest on the seabed. Semi submersibles are more stable than drill ships and ship-shaped barges and are used extensively to drill wildcat wells in rough waters such as the North Sea. Two types of semisubmersible rigs are the bottle-type semisubmersible and the column-stabilised semisubmersible. See floating offshore drilling rig.

SEPA

Scottish Environmental Protection Agency

Separator

A cylindrical or spherical vessel used to separate the components in streams of mixed fluids. See oil and gas separator.

Service well

See injection well

SET

Solid expandable tubulars

Setting point

The depth to which a string of casing is set and cemented.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



SFT

Seabed functional testing OR Norwegian Pollution Control Authority OR Surface flow tree

Shale

A very fine-grained, muddy sedimentary rock with low porosity and consequently poor reservoir potential.

Shale shaker

A vibrating screen used to remove cuttings from the circulating fluid (mud) in rotary drilling operations. The size of the openings in the screen should be carefully selected to be the smallest that will allow 100% flow of the fluid. Also called a shaker.

Shaped charge

A relatively small container of high explosive that is loaded into a perforating gun. Upon detonation, the charge releases a small, high-velocity stream of particles (a jet) that penetrates the casing, cement and the formation.

Shark jaws

Jaws that emerge from ship's deck (typically of an anchor handling vessel) to grip cable fittings

Sheave

A grooved pulley wheel

SHEQ

Safety, health, environment and quality

Ship-shaped barge

A floating offshore drilling structure that is towed to and from the drilling site. The unit has a streamlined bow and squared-off stern, a drilling derrick usually located near the middle of the barge, and a moon pool below the derrick through which drilling tools pass to the seabed.

Shoe

A strengthened fitting on the end of a string of casing to protect the tubulars and to help direct the cement to the annulus.

Shoestring sand

Thin, often elongated streaks of reservoir sand completely surrounded by impermeable layers.

Shut-in pressure

The pressure in a shut-in well; the static pressure.

Shuttle tanker

A moderate-sized oil tanker used to transport oil from larger vessels to port.

SI

System Internationale (International System of Units) OR Statutory Instrument OR Shut in

SI 289

Offshore Installations (Construction and Survey) Regulations, Statutory Instrument No 289 (1974) were revoked in 1998 in favour of Design and Construction Regulations 1996

Sialic layer

The upper layer of the earth's crust, in which prospective reservoirs are found, so called from the predominance of silicon and aluminium in its composition.

SIBHP

Shut-in bottom hole pressure

Sidescan sonar

Acoustic survey equipment towed close to the seabed, used for surveying pipelines (see also sonar).

Side-tracked well

A well that has been re-drilled from an intermediate depth. Wells are re-directed or sidetracked for various reasons, usually because of technical problems deeper in the original well.

Sidewall coring

Obtaining rock samples from the sides of a well bore using a special tool.

SILD

Sampling integrated logging device (for well testing without producing hydrocarbons to the surface).

Single point mooring system

An offshore system to which the production from several wells located on the seabed is routed, and to which a tanker ship ties up in order to load the produced oil. The tanker is moored to a single point on the buoy and is thus free to rotate around the buoy, depending upon wind and current directions.

SIREN

Subsea Investigation and Reporting of Events Network, organised by the SUT.

SIS

Swedish Standards Institution

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS

**SIT**

System or site integration testing

SIV

Scale inhibitor valve OR scale injection valve

SIWHP

Shut-in wellhead pressure (= SIBHP – static head)

Skid

Steel framework used to contain equipment; it is usually transportable

Skimmer

Equipment for removing the surface layer of oil from an oil spill, or from an effluent water separator tank that is designed for the purpose.

Sling

A wire or rubber and fabric strop used to connect the crane hook to the item to be lifted for lifting.

Slips

Metal wedges which are set in the annulus at the drilling floor to grip and support tubulars while sections are added or removed.

Slop tank

Temporary storage for water that is contaminated with oil.

Sloughing

Crumbling or disintegration of the wall of the borehole.

Slug

An accumulation or pocket of liquid or gas formed in a pipeline as the flowing fluid pressure decreases. Slugs also form in multiphase pipelines when gas breaks out of solution.

Slug catcher

A large separator for removing liquid slugs at its destination without disrupting the gas flow.

Slurry

A mix of cement and water used in drilling/cementing OR solid particles or crushed fragments in a liquid for pipeline transportation.

SMACS

Supervisory monitoring and control system

SMS

Safety Management System OR Swedish Material and Mechanics Standard

SMYS

Specified minimum yield stress

SNG

Synthetic natural gas

SOF

Solid oxide fuel (fuel cell technology)

SOLAS

Safety of life at sea

Solid alkanes

Hydrocarbon fractions which are solid at normal temperatures. See also alkanes.

Sonar

Sound and ranging; the use of sound echoes to locate objects underwater.

Soup

Nitro-glycerine. It is used in explosive fracturing of a downhole formation.

Sour oil/gas

Oil or gas with a relatively high content of (odorous, poisonous or corrosive) sulphur compounds such as hydrogen sulphide.

Source rock

The sediment/rock in which fossil deposits are formed into hydrocarbons which may then migrate into different porous formations.

SOx

Sulphur oxides

S/P or Spacing pattern

The density of development drilling on a reservoir expressed in acres per producing well.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS

**SPAR**

A very large, manned SBM incorporating oil storage.

Sparker

Part of an echosounder for gauging the thickness of soft seabed deposits.

SPBM

Single point buoy mooring; see SBM for definition.

SPCM

Subsea power and control module

SPCP

Subsea power and control pod

SPE

Society of Petroleum Engineers

Spider

A power-operated set of slips for gripping tubulars

Spider deck

The lowest deck on an offshore drilling rig below the rig floor.

Spinner

A powered spanner or wrench for gripping and rotating drill pipe when screwing or unscrewing the joints. Previously, the spinning chain was wrapped around each joint turn and pulled on the cathead (winch) to rotate it.

SPJ

Steel pile jacket

SPL

Subsea pig launcher

Splash zone

The part of an offshore structure that is regularly exposed alternately to atmosphere and water or spray; it is consequently highly prone to corrosion.

SPM

Single point mooring

Spool/spool piece

A short section of pipe with flanges or threaded connections at each end. It may be of any length required to make up pipeline or casing to the exact required length.

Spot charter

A one-voyage tanker charter or one-well rig charter, as opposed to a time charter.

Spread

Any complete set of equipment and ancillary vessels or vehicles for a designated task e.g. diving spread.

SPS

Subsea production system OR Surface process shutdown

SPU

Subsea pigging unit OR syntactic polyurethane

Spud (in)

To begin drilling; to start (or re-start) the hole. May also be used to describe the process of setting the legs of a jack-up into the seabed.

Spud can

A cylindrical device, usually with a pointed end, that is attached to the bottom of each leg of a jackup drilling unit. The pointed end of the spud can penetrates the seabed and helps to stabilise the unit whilst it is drilling.

Squeeze

To insert cement under pressure into the poorly sealed annulus of a well, past the existing material. Also method used to inject chemicals down production tubing from well head.

Squib shot

An explosion set off in a producing well to stimulate production. See stimulation, also soup.

Squinch Joint

A special threadless tool joint for large-diameter pipe, especially conductor pipe, sometimes used on offshore drilling rigs. When the box is brought down over the pin and weight is applied, a locking device is actuated to seat the joints. Because no rotation is required to make up these joints, their use can save time when the conductor pipe is being run. Squinch Joint is a registered trademark of Vetco Offshore Inc.

SS

Subsea (when referring to reservoir depth etc. below the seabed) OR subsurface OR Stainless steel

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS

**SSIV**

Subsea (safety) isolation valve

SSTT

Subsea test tree

SSV

Surface safety valve

SSSV

Surface controlled subsurface safety valve OR Subsea safety valve

Stab

To make a connection by inserting one device into another.

Stabilized crude oil

Crude oil from which gases that are volatile at normal surface conditions have been removed in order to meet commercial sale specifications. Also known as stock tank oil.

Stabilized flow

A sustained rate of flow from a well without pressure drop; this is determined by well testing.

Stabilized well

A well in which the formation pressure is balanced by the weight of the mud column.

Start up

The commencement of production from a commissioned and tested installation and bringing it to working status.

Stb

Stock tank barrels; volume of oil measured in barrels at normal temperature (68° F) and atmospheric pressure.

Steam injection/flooding

Techniques used to lower the viscosity of residual oil in the reservoir and to assist it to flow to a well. (See also enhanced oil recovery.)

Steel-jacket platform rig

A rigid offshore drilling platform used to drill development wells. The foundation of the platform is the jacket, a tall vertical section made of tubular steel members. The jacket, which is usually supported by piles driven into the seabed, extends upward so that the top rises above the waterline. Additional sections that provide space for crew quarters, the drilling rig, and all equipment needed to drill are placed on top of the jacket. See platform rig.

Step-out well

An appraisal well specifically aimed at locating the lateral limits of a reservoir, which may later be used for production.

STH

Side-tracked hole

Sticking

Jamming of the drill string in the well borehole usually caused by a high differential pressure and a build-up of mud solids on the rock face.

Stimulation

Methods such as acidizing (chemical) or fracturing (pressure) or the use of explosives designed to break up "tight", low-permeability reservoir rock in the vicinity of a well so that oil can flow freely into the bore.

Stinger

A tubular steel support frame attached to the stern of a pipelay vessel to control the bending of the pipe as it enters the water.

STOIIP

Stock tank oil (stabilized crude oil) initially in place.

Stoppie

To hot-stab and insert a link or diverter loop into pipework.

STP

Standard temperature and pressure

Stress corrosion cracking

The cracking which results from a combination of stress and corrosion.

String

The entire length of casing, tubing, sucker rods, or drill pipe run into a hole.

Stripping

The removal or replacement of drill pipe or tubing strings from a well under pressure using a stripping BOP.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS

**Stripping gas**

Gas, normally process gas used to assist in the purification of a liquid by reducing the partial pressure of gaseous contaminants to encourage vaporisation.

STT

Surface test tree

STTD

Sidetracked total depth

Subsea blowout preventer

A blowout preventer placed on the seabed for use by a floating offshore drilling rig.

Subsea template

A device placed on the seabed to facilitate the drilling of wells. When a template is used, the wells are drilled through the template and completed by the mounting of subsea xmas trees.

SUDU

Subsea umbilical distribution unit

Sulphide stress cracking

Cracking of metallic materials due to exposure to fluids containing hydrogen.

Surfactant

A substance that affects the properties of the surface of a liquid or solid by concentrating the surface layer. Surfactants can ensure that the surface of one substance or object is in thorough contact with the surface of another substance.

SUS

Saybolt universal seconds (unit of oil viscosity)

SUT

Society for Underwater Technology

SUTA

Subsea umbilical termination assembly

SUTU

Subsea umbilical termination unit

SV

Support vessel

SW

Salt water OR suspended well OR saturated water

Swab Valve

Subsea tree mounted valve used during workover

Swabbing

The lowering of the hydrostatic pressure in the hole due to the upward movement of the drill pipe and/or tools. Also the use of wireline equipment to clean a well by scooping out liquids.

SWAT

Subsea well abandonment tool

SWD

Salt water disposal

SWI

Salt water injection

SWIFT

Structured What If Technique (reliability study method)

SWIS

Site welding instruction sheet

Swivel

A rotary tool that is hung from the rotary hook and travelling block to suspend and permit free rotation of the drill stem. It also provides a connection for the rotary hose and a passageway for the flow of drilling fluid into the drill stem.

SWL

Safe working load

SWOT

Strengths, Weaknesses, Opportunities and Threats Analysis

Syncline

A downward, trough-shaped configuration of folded, stratified rocks. Compare with anticline.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



System-Module™

An all-electric, retrievable module that forms an integrated system and that can accommodate a wide range of equipment and sub-systems.

System-Module Booster™

Alpha Thames' multiphase pumping module with integral power and control equipment. This forms part of the AlphaCPU™.

System-Module Separation™

A processing module, containing either two-phase or three-phase separation equipment with or without liquid booster pumps and sand removal. This forms part of the AlphaCPU™.

T

Tank bottoms

Fluid in a tank below the pump suction/outlet, not normally evacuated.

Tank dipping

The initial action in determining the contents of storage tanks. A weighted line is lowered through a "well" in the roof of the tank, and the level of the contents and/or underlying water marked. The volume represented by the difference in level is then calculated by reference to tank tables.

Tanker

Any mobile storage unit for the bulk transport of crude oil, gas or products; usually refers to marine transport.

Tapping a line

Cutting into a pipeline to install a branch connection.

Tar

See Asphalt

Tariff

Any volume-based or tonnage-based rental charge for the use of an installation or equipment, e.g. pipeline tariff, processing tariff. As distinct from royalties, tariffs are payable to the owners of the installation.

Tar sands

Sands impregnated with oil in the form of asphalt or bitumen which can be mined for its extraction.

TBL

Federation of Norwegian Manufacturing Industries

TC

Tree cap

TCE

Tons of coal equivalent (see tons equivalent, below)

TCF

Trillion cubic feet, 10^{12} ft³, 10^{12} cu ft

TCMS

Tripod catenary mooring system

TCRT

Tree cap running tool

TCV

Temperature control valve

TD

Total depth i.e. the achieved (drilled) depth in a well at any one time OR target depth (for a well).

TDU

Tool deployment unit

Tectonics

The process of formation and evolution of the earth's solid surface crust. (See also Plate tectonics.)

TEG

Triethylene glycol

TEL

Tetra ethyl lead

Telemetry

A method of communicating data from/to remote instrumentation systems to a central control system using radio satellite, fibre optics or cable links. Also associated with the remote control of process equipment.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS

**Temp**

temperature

Temperature bomb

A capsule containing instruments for measuring well temperatures down a well.

Template

This usually refers to a structural framework within which subsea wellheads are grouped. It may also refer to a prepared foundation or "mattress" for soft or shifting seabed on which a jackup rig can be stably installed.

TEMPSC

Totally enclosed, motor propelled survival craft

Tensioner system

A system of devices installed on a floating offshore drilling rig to maintain a constant tension on the riser pipe despite any vertical motion made by the rig. The guidelines must also be tensioned, and a separate tensioner system is provided for them.

Tension-leg platform

A compliant offshore drilling platform used to drill development wells. The platform, which resembles a semisubmersible drilling rig, is attached to the seabed with tensioned steel hawsers or tubes. The buoyancy of the platform applies tension to the hawsers or tubes. See platform drilling rig.

Tertiary

Period or rock system divided into Palaeocene, Eocene, Oligocene, Miocene and Pliocene epochs or series OR the third set of windings on a transformer or set of connections.

Terminal

Usually refers to a loading or unloading facility in a transportation system for oil or gas; also covers associated processing and storage facilities.

Tethered platform

A variant of the tension-leg platform.

TFL

Through-flowline system. A system for inserting workover tools or instruments into a subsea well completion through the production gathering line or flowline.

TGB

Temporary guide base

TH

Tubing hanger OR tight hole

Thermal recovery

Enhanced oil recovery based on heating the oil in the reservoir by steam injection or sub-surface combustion (fire flood).

Thief zone

A porous, fractured or vuggy formation in a well, into which drilling fluid escapes. It must be plugged or lined with casing.

Third party gas

Term used to describe gas sold direct from oil company to parties other than British Gas, the previous monopoly holders.

THFP

Top hole flowing pressure

Thixotropy

The quality of fluids, such as drilling mud and some clays, to set when left undisturbed but to become fluid again when force or pressure is applied. This can be important when selecting drilling sites, e.g. for jack-up rigs, as well as in mud engineering.

THP

Tubing head pressure

Throttle

Regulation of fluid flow by a throttling valve or fixed orifice

THRT

TH Running tool

Through flow line (TFL)

A system for inserting workover tools or instruments into a subsea well completion through the production gathering line or flowline.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Thrusters

Fixed or steerable (directional or azimuth) propellers on a vessel which enable it to be manoeuvred with great accuracy.

Thumper

See Vibroseis.

TI

Temperature indicator

Tie-in

The action of connecting one pipeline to another or to equipment (such as a KeyMAN™ or manifold). Pipeline tie-in commonly describes the connection itself. Also known as tie-back.

TIG

Tungsten inert gas (welding)

Time map

A contoured map of a subsurface geological formation based on the time taken to reflect seismic impulses rather than the subsequently computed/interpreted depths on a depth map.

TLP

Tension leg platform

TLQ

Temporary living quarters

TML

Tetra methyl lead

TOE

Tons of oil equivalent (see tons equivalent, below)

Tons equivalent

An expression of the thermal value of one fuel in terms of another, e.g. TCE, TOE.

Topsides

Upper part of a fixed installation which sits on top of the jacket and consists of the decks, accommodation and process equipment.

Torque ripple

Variations in the torque produced by a motor resulting from the supply current deviating from the required sine wave. This often occurs as a function of pulse width modulation used in VSD's.

TP

Test pressure

TPS

Total platform shutdown

TQS

Total quality system

TR

Temporary refuge

TRA

Total risk analysis

Tracing

A system of steam pipes or electric elements fitted to vessels or pipelines to keep them warm so that very heavy viscous crude oil will flow freely.

Transducer

An instrument for converting one form of energy into another e.g. enabling acoustic signals to be used in controlling a subsea well.

Transponder

An acoustic device which, on receiving a preset acoustic signal, transmits a response.

Trap

Layers of buried rock strata that are arranged so that petroleum accumulates in them.

Travelling block

An arrangement of pulleys or sheaves, through which drilling line is reeved and which moves up and down the derrick or mast. The travelling block is suspended from the crown block from which the hooks and swivel are, in turn, suspended. See block.

TRFCV-H

Hydraulic tubular retrievable flow control valve.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Trillion

The oil and gas industry uses the U.S. definition, namely one million million, 10^{12} .

Trip

The operation of hoisting the drill stem from and returning it to the wellbore. Shortened form of "making the trip". See make a trip, also round trip, short trip OR the automatic action of a control system in stopping a process if a predetermined value is achieved

Trip gas

High pressure gas in a well which must be carefully controlled when withdrawing the drill string (making a trip).

Trips

Surges arising from unstable hydrocarbon flow through flowlines, which can cause the pressure to peak, to the extent that it may lead to production shut down.

TRSCSSV

Tubing-retrievable, surface-controlled subsurface safety valve

TRT

Tree running tool

Trunk lines

Long distance pipelines, as distinct from field, gathering or branch lines. (Similar definition for telephone systems lines.)

TSCJ

Tree supply control jumper

TSO

Temporarily shut down

TSI

Temporarily shut in

TSR

Temporary safe refuge

TT

Temperature transducer OR through tubing

Tubing

Small-diameter pipe that is run into a well to serve as a conduit for the passage of oil and gas to the surface. OR Small bore hydraulic or chemical injection lines, usually under 2-inch bore size; not to be confused with piping. (See also coiled tubing.) Tubing is installed inside the casing in a well.

Tubing head

Similar to the casing head, the tubing head is installed at the wellhead on the production tubing; it seals off the annulus between the casing and the tubing, and carries the connections for production flowlines.

Tubing hanger

Incorporated in a tubing head (similar to a casing hanger).

Turbine flowmeter

An instrument that measures rates of flow in a pipeline by the electric current generated by a small rotor inserted in the line.

Turnkey contract

A fixed price contract for construction, drilling a well, etc. with the contractor taking the risk of non-completion. A true "turnkey" involves the contractor funding the operations until start up.

Turret moored

A production turret (a cylindrical buoy) is built into a cavity similar to a moon-pool in a floating ship-shaped production facility. The turret is connected to subsea wellheads by flexible hoses, and is moored in a fixed orientation. The ship/facility containing the process, storage and offloading equipment is free to rotate or "weathervane" around the turret to present an optimum profile to wind and sea.

TUT

Topside umbilical termination

TUTU

Topside umbilical termination unit

TVD

True vertical depth; the vertical distance below surface datum reached by a deviated well.

TVDSS

True vertical depth subsea (below seabed)

TVP

True vapour pressure

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



U

UART

Universal asynchronous receiver/transmitter

UCM

Universal control module

UEL

Upper explosive limit

UHF

Ultra high frequency

UHMPE

Ultra high molecular polyethylene (rope)

UKAS

United Kingdom Accreditation Service

UKCS

United Kingdom Continental Shelf

UKOOA

UK Offshore Operators Association Ltd <http://www.oilandgas.org.uk>

UL

Underwriters Laboratories Inc. (USA)

Ullage

Unused storage, tanker, pipeline or process plant capacity.

ULS

Ultimate limit state

Ultrasonic testing

A non-destructive testing method in which ultrasonic waves (sound waves of frequencies too high to be heard) are beamed at an object, and the reflected energy measured.

UMC

Underwater mateable connector

Unconformity

Lack of continuity in deposition between rock strata in contact with one another, corresponding to a gap in the stratigraphic record. OR the surface of contact between two rock beds in which there is a discontinuity in the ages of the rocks.

Underwater habitat

An air chamber or structure such as a diving bell in which divers can live whilst not working, or a chamber where work can be carried out such as a subsea enclosure or hyperbaric welding chamber.

UNS

Universal Numbering System

UPS

Uninterruptible power supply

Updip

An area of a structure where the top of the formation is higher (e.g. offshore, nearer the sea level) than the point under consideration.

Upset

The thickening or increased diameter at the joints of tubulars to provide the necessary strength.

Upstream

Used to describe the area from what a fluid flows from e.g. the well.

U/S

Unserviceable (i.e. not fit for service)

USG

United States gallons

USV

Underwater safety valve

UT

Ultrasonic testing

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



UTA

Umbilical termination assembly/unit

UTM

Universal transverse Mercator (more accurate co-ordinate system than the geographical system because it takes into account the variations in the earth's sphere)

UV

Ultraviolet

V

V

Volt, volume

Vam

Trade name for casing thread produced by the Vallourec company of France.

Vapour pressure

The pressure exerted by the vapour from a substance, and also the pressure required to prevent a liquid from vaporising.

VDU

Visual display unit

Vent

A pipe or fitting on a vessel that can be opened to the atmosphere

Vent stack

Open ended pipe and support framework used to discharge vapours into the atmosphere as a safe location above the installation, without combustion.

VFD

Variable frequency drive

VHF

Very high frequency

Vibrating screen

A sieve-like part of the shale shakers for separating rock cuttings and mud returned from a well.

VIM

International vocabulary of basic and general terms in metrology.

VIV

Vortex induced vibration

VMC™

Alpha Thames' Valved Multiported Connector – enables the simultaneous connection of a number of piping runs.

VOC

Volatile organic compounds

Volatility

The readiness with which a liquid converts to its gas state; highly volatile liquids include the light hydrocarbon fractions.

VP

Vapour pressure

VSD

Variable speed drive

W

WAP

Wax appearance point.

Water based mud

Drilling fluid based on suspension of solids, such as bentonites, in water.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Water drive

Where a hydrocarbon reservoir is in contact with an underlying water table, the formation pressure will drive the water into the rock pores vacated by produced fluids, thus tending to maintain reservoir pressure and assist production.

Watering out

When the proportion of water in production from a well is so high that it must be shut in.

Water injection

The injection of produced water or water from the host in order to boost production from the reservoir

Water re-injection

The disposal of produced water into a disposal well (not for boosting the reservoir).

Water saturation

The proportion of water in the pore spaces of a reservoir. See Porosity.

Water separation

Removing the water from a production flow of oil or gas. There are several techniques including settlement, heating and electrostatic precipitation particularly for breaking down water-oil emulsions.

Water table

The level in the earth below which rock pores are saturated with water.

Wave period

The time separating successive crests of similar waves passing a given point.

Wave recorder

An instrument which measures and records the height and frequency of waves.

Wax

Paraffin waxes are found in crude oil and may be a significant proportion of it, requiring special treatment to allow the oil to flow freely at surface conditions.

WC

Water cut OR wildcat

WCT-BOP

Wireline/coiled tubing BOP (blowout preventer)

WD

Water depth OR water disposal (well)

Weather window

The period of relatively good (summer) weather within which a given offshore operation can take place. A weather window can also occur in winter, but is usually hard to predict and of short duration.

Weathering

Permitting crude oil to stabilize by venting its volatile fractions to atmosphere (not now practised) OR the process acting on exposed geological strata.

Weight indicator

A large instrument on the rig floor which displays the weight of the drill string, and hence the pressure on the drilling bit.

Weld fillet

In overlapping surfaces, the weld makes a fillet in the angle formed by the end of the overlap.

Welding bug

Welding head of an automatic welding process.

Well

Normally steel-lined boreholes drilled to search for or exploit hydrocarbon reservoirs.

Well completion

The activities and methods necessary to prepare a well for the production of oil and gas; the method by which a flowline for hydrocarbons is established between the reservoir and the surface.

Wellhead

"Wellhead" is descriptive of a location or function (including the X tree and hang offs) rather than a specific item of equipment. Permanent equipment used to secure and seal the casings and production tubing and to provide a mounting for the Christmas Tree. See Production Wellhead.

Wellhead platform

An offshore platform designed to support only wellheads (including trees etc) and associated piping, production fluids being transferred to a shore gathering station or nearby platform for processing.

Wellhead separator

The first process vessel in a production operation, operating at or near wellhead pressures.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS

**Well logging**

The recording of information about subsurface geologic formations. Logging includes records kept by the driller and records of mud and cutting analyses, core analyses, drill stem tests, and electric, acoustic and radioactivity procedures.

Well permit

Government Permission to drill a well. Obtaining this is frequently a detailed process.

Well programme

The engineering design and technical/operational plan for drilling a well, completing and testing it (as applicable).

Well servicing

Bringing a completed well into production, and subsequent maintenance work performed on an oil or gas well to improve or maintain the production from a formation already producing. Usually, it involves repairs to the pump, rods, gas-lift valves, tubing, packers, etc.

Well shooter

An explosives expert who uses explosions to stimulate production.

Well testing

Testing in an exploration or appraisal well is directed at estimation of reserves in communication with that well, in addition to well productivity. Testing in a production well also monitors the effects of cumulative production on the formation. Tests basically consist of a series of measurements of pressures, fluid flows and temperatures down hole (PVT) in a controlled sequence of "flowing" and "shut-in" periods for recovery of stable reservoir conditions. The time taken to recover is also recorded. Various forms of well stimulation may also be built into the sequence. Tests will also include the functioning of well equipment.

Wet gas

Natural hydrocarbon gas containing significant amounts of naturally liquid hydrocarbons.

Wet tree

A subsea wellhead "tree" which is exposed to the water rather than enclosed.

Wet weld

Underwater welding as opposed to normal atmospheric welding or hyperbaric chamber welding.

WH

Well head

Whipstock

A tool for deviated drilling, basically a wedge-shaped block which is lowered into the well to divert the bit onto a chosen path at an angle to the original hole.

Whitaker capsule

A type of survival capsule.

WHP

Wellhead pressure OR well head platform OR wellhead protector (subsea)

WHSIP

Wellhead shut-in pressure

WI

Water injection OR working interest

Wild well

A well out of control, a blowout.

Wildcat

A well drilled in an area where no oil or gas production exists. With modern exploration methods and equipment, about one wildcat out of every seven proves productive, but not necessarily profitable, OR to drill wildcat wells, OR (nautical) the geared sheave of a windlass used to pull anchor chain.

Window mill

A downhole cutting tool used to cut an aperture laterally in the casing through which to sidetrack or deviate the well.

Wireline

A small-diameter metal line used in wireline operations; also called slick line. A system in which a flexible cable and reel is used to lower log or maintenance equipment down a well, rather than a rigid drill string, with considerable savings of equipment, manpower and time.

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Wire rope

A cable composed of steel wires twisted around a central core of fibre or steel wire to create a rope of great strength and considerable flexibility. Wire rope is used as drilling line (in rotary and cable-tool rigs), coring line, servicing line, winch line, etc. It is often called cable or wireline. However, wireline is a single slender metal rod, usually very flexible. Compare wireline.

WLT

Wire line test

WO

Workover

Wobble index

An expression of the heating value of a gas flame, used in gas marketing. It is derived by dividing the gross calorific value of the fuel by the square root of its specific gravity, expressed in, e.g. mega joules per cubic metre or BTU per cubic foot.

WOCM

Workover control module

WOCP

Workover control panel

WOCS

Workover control system(s)

Workover

A maintenance job on a well usually to replace equipment or to stimulate production. Re-entry into a completed well for modification or repair work.

Workover rig

Normally a smaller, portable version of the main drilling derrick which can be used to carry out work over operations on installations which do not have a permanent derrick.

World scale

A reference table of freight rates between most ports in the world. Actual freight contracts are usually fixed at World scale for the route plus or minus a percentage factor that reflects freight market conditions.

W.o.W time

Time when a rig or installation vessel is "waiting on weather" to moderate before operations can continue.

WP

Working pressure

WPQR

Welding procedure qualification record

WPS

Welding procedure specification

WSD

Working stress design

WSE

Written scheme of examination

WSW

Water supply well

X

Xaloy

A low-friction alloy used for facing drilling tools, etc.

X over

Crossover (piping)

XOV

Cross-over valve

X tree

Christmas tree

XTRT

Christmas tree running tool

Dictionary of Oil Industry Terminology

DEFINITIONS ACRONYMS and ABBREVIATIONS



Y

Yield

The total amount of product of a refinery process or of all products of all processes of a refinery compared with the equivalent amount of feedstock. A "Refinery Yield" for a given crude oil feedstock and refinery will include a table of amounts of all products derived from a barrel or ton(ne) of crude minus the refinery's own usage for fuel, flaring and other losses. Since refineries commonly use several feedstocks simultaneously, such a yield is often measured or predicted on the basis of adding incremental feedstock to a fixed throughput.

Yield Point, YP

The force needed to start a fluid flowing, i.e. to overcome its viscosity or thixotrophy OR with reference to materials, the point at which material changes from elastic deformation to permanent (plastic) deformation resulting in failure or rupture.

Z

Zone

The interval between two depths in a well containing a reservoir or other distinctive characteristics OR Specific areas where restrictions apply e.g. safety zone, hazardous zone (around an offshore installation), danger zone (military activity area), etc.

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